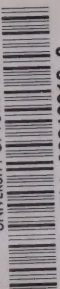


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DENTURE THERAPY SERVICES

IN ONTARIO

by

M. H. Pierce

January, 1980

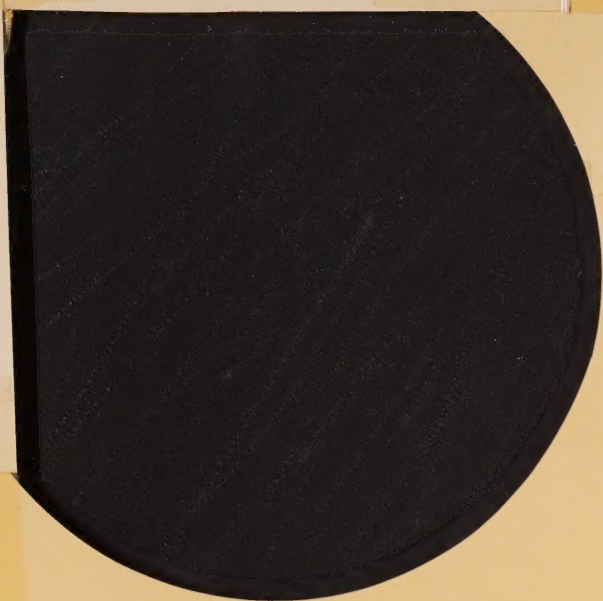
RESEARCH REPORT

*issued by the
Dental Health Care
Services Research Unit*

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DENTURE THERAPY SERVICES

IN ONTARIO

by

M. H. Pierce

January, 1980

Research Report No. 32

Dental Manpower Report No. 6 (DM 381)

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Dental Health Care Services Research Unit
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SUMMARY

Assessment of the role denture therapists perform in the delivery of dental care and the determination of the supply of denture therapy services available for a given geographical location was undertaken at three levels. At its most basic level, analysis was largely descriptive and demographic in documenting the characteristics of current practitioners. Secondly, the way in which the profession was organized to provide its service to the public was examined. The volume and supply of these services by geographic location was then presented. Finally, a brief summary of current legislation on denture therapy and therapists' relationships with other members of the dental care system was undertaken. Some of the major findings are presented below.

1. Sixteen percent of licensed denture therapists in Ontario who responded to the survey form are not practising denture therapy; instead they are either dental technicians or dental lab owners.

DEMOGRAPHIC CHARACTERISTICS

2. Denture therapists have, for the most part, received their training in a field other than denture therapy, most notably in dental technology (95%) and in dentistry (24%). Only 37 percent of practising denture therapists have taken a course in denture therapy.
3. Sixty-one percent of denture therapists have a birthplace outside of Canada with the vast majority coming from Europe (66%).
4. Therapists are an older group with the median age being 45 years. Only 13 percent of the practitioners are under thirty but 35 percent are over fifty years of age.

PRACTICE CHARACTERISTICS

5. Not all denture therapists restrict themselves to a single workplace: 34 percent have a second workplace and 16 percent work in a third office or clinic. Only 5 percent, however, list something other than practice as their main activity.

6. Thirty percent of practising therapists engage in some form of supervised denture therapy with 87 percent of these carrying it out in a dentist's office .
7. Solo private practice is the main form of workplace organization where denture therapy is carried out.
8. Fifty-four percent of all denture therapy offices or clinics have auxiliary personnel working for them at least on a part-time basis. The average number of auxiliaries is one with the secretary-receptionist being the most common (41%) and the dental technician the second most frequently employed type of assistant (36%). Most auxiliaries (64%) work full time.
9. Employment of auxiliary personnel was influenced by type of practice with 79 percent of group practitioners having auxiliaries working for them as opposed to 53 percent of solo practitioners.
10. Only 6 percent of current practitioners are seeking auxiliary personnel with the dental technician being the most sought after.
11. The average practitioner works a 40 hour week spread over five days with the amount of time devoted to practice varying as to whether the practitioner devotes all his time to his practice or only part of his time. He also works approximately 48 weeks a year.
12. The amount of time spent with patients represents only 44 percent of the total amount of time devoted to the practice each week.
13. The average number of years in practice is 4 years with 85 percent having worked 4 years or more.
14. Twenty-five patients are, on average, seen by each denture therapist per week. The number of patients seen is proportional to the amount of time devoted to practice. In general the hourly load per practitioner is 1.5 patients.
15. The patient load per week is influenced by use of auxiliaries. Those practices with auxiliaries see 37 percent more patients than those without assistants. Patient load is not influenced greatly by type of practice or age of practitioner. It is only in the over 60 age group that the patient load drops significantly.
16. Sixty-three percent of all patients are obtained by patient to patient referral with 13 percent being referred by dentists.
17. More than half of the denture therapists stated they were less busy than they wanted to be and only 5 percent stated they were busier than they wanted.
18. The average patient wait for an appointment is two days with one-third being able to see a denture therapist within a day.

19. Ninety-seven percent of the practitioners do not see the need for another denture therapist in their area.

GEOGRAPHIC DISTRIBUTION

20. Denture therapy offices are not distributed uniformly across the province with 65 percent of the offices located in the Central Ontario Planning Area. The northern parts of the province have only 5 percent of the offices.
21. Those counties with a higher percentage of urban areas have a correspondingly higher percentage of denture therapy offices.
22. There is a tendency for denture therapists to congregate in the larger urban centres with 53 percent located in communities with a population of 100,000 and over.
23. Based on the population:manpower ratio, the supply of denture therapy offices exceeds its population by 21 percent in the Southwestern Regional Planning Area and by 5 percent in the Central Region. In the Northwestern part of the province there are 84 percent fewer therapists than the population size warrants.
24. Among Ontario's 49 counties, districts and regional municipalities, eighteen have relatively more therapy offices than population and the remaining 31 have fewer than the population size warrants.
25. In Ontario there were 30,889 persons per denture therapy office in 1979. The Central Planning Region is the best supplied with a ratio of 19,148 persons per denture therapy office.
26. Based on the population:manpower ratio, denture therapy offices are evenly distributed throughout the province by community size. The only area of over-representation occurs in communities with a population of 10,000 or less.
27. Offices in the Eastern Regional Planning Area provide the longest hours of service per week with 33 hours and the Northeastern Region the fewest. On the other hand, the offices in Eastern Ontario treat, on average, the fewest patients per week and those in Northeastern Ontario, the most. Both Regions have the same population:manpower ratios.
28. County differences in amount and volume of services show a positive relationship in that those counties with longer office hours per week treat, on average, more patients per week.
29. Communities between 50 and 100,000 population have offices which provide the longest average number of service hours per week (37.5) and those with populations less than 10,000, the fewest.
30. The larger communities, in general, have offices which treat more patients.

DENTURE THERAPY AND THE STATE

31. Eighty seven percent of therapists feel that the legislation governing supervised denture therapy should be changed.
32. The majority (67%) want supervised denture therapy abolished altogether.

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INTRODUCTION

General Purpose of the Report

This study of denture therapists is part of a larger study of dental manpower in Ontario which is attempting to determine the current state of dental manpower supply and utilization. To date, the only studies that have been carried out on denture therapists have been government studies which have concentrated on the legal definition of this group and their relationship with the dental profession.* No specific studies have been undertaken which were aimed at describing and analyzing denture therapy as a specialized occupation. No information is available on the geographical location, age, sex or educational background of denture therapists. There exists no adequate account of the basic features of the offices or clinics in which the denture therapist works or of the ancillary employees who work with denture therapists.

This lack of research into and information on denture therapists is not surprising considering the opinion of the dental profession towards this 'fringe' group and the current state of dental research in general. Most studies attempting to assess the nature and quantity of dental services in this province have focused primarily on the dentists' role in the delivery of care. When auxiliary personnel have been studied the emphasis has been on paraprofessional workers under the direct supervisory control of the dentist such as the dental assistant and the dental hygienist, not on other independent practitioners.

* See, for example:
Committee on the Healing Arts Report, Feb. 1970; Ad hoc Committee on Dental Auxiliaries, Sept. 1970 and; Report of the Ontario Council of Health Task Force on Dental Technicians, March 1972.

The present study proposes to treat denture therapy not as an unique or deviant part of the dental care delivery system but as a component of that system which provides a particular service, has a particular work organization and clientele. As such, it must be viewed in relation to a total system of dental care.

In assessing the role denture therapists perform in the delivery of dental care, in determining the supply of denture therapy services available at a given point of time for a given geographical location, analysis must proceed on various levels. At its most basic level, the supply of denture therapy services is determined by the availability of manpower; that is, the number of denture therapists providing a service. As such the task is primarily descriptive or demographic in nature. At a second level the assessment of the supply of services must concentrate on the way in which the profession is organized to provide these services. The type(s) of work structures, the amount of time devoted to the practice of denture therapy and the utilization of auxiliary personnel all affect the quantity of service available. Finally, any service profession does not exist in a vacuum, it is affected by the social climate in which it is practised. The types of services provided and therefore the potential numbers of patients treated are influenced by both legislative controls and relationships with other members of the dental care delivery system. These three components, denture therapists as providers of services, the organizational structures set up for the provision of care and the social climate in which denture therapy is carried out, therefore, form the necessary framework for the analysis of denture therapy services available in this province.

The data for the study were collected by means of a mail questionnaire sent out to all denture therapists licensed to practise in Ontario in 1979*. The results of the study are organized in three major sections. Section 1 attempts to answer the question, "Who are denture therapists?". It describes the specific kinds of people selected into denture therapy and specifies their social characteristics. Section 2 is concerned with the practice of denture therapy. The first chapter presents a descriptive profile of practice types and the use of auxiliary personnel by therapists. A second chapter concentrates on the location of denture therapy practices and develops an index of the volume of services available by location based on number of offices, service hours provided per week and number of patients treated per week. Section 3 concentrates on the ways in which denture therapy is controlled. An outline of the legislation which has developed in Ontario is presented and an analysis of the relationship between denture therapists and dentists as illustrated by the supervised denture therapy issue is carried out.

Sample

Although there are currently 352 licensed denture therapists in Ontario, six individuals were deleted from the survey population resulting in a total population of 346 which were sent questionnaires.** The response rate to our survey was 74.3% or 257 denture therapists. The data to be presented in this report are, therefore, based on these 257 responses.

* For a copy of the questionnaire, see Appendix 1.

**Of these six, four no longer resided in Ontario and two were unlocatable.

In order to assess the representativeness of the sample to the general population, comparisons of the geographical locations of respondents and non-respondents by main workplace were made. The data are presented in Appendix 2. Although no significant differences were found between the two groups based on geographical location by county, the northern areas of the province were slightly under-represented in the sample. Only 62.5% of those in Northeastern Ontario and 33.3% of those in Northwestern Ontario responded to the survey form. Numerically, however, these regions consist of only 19 licensed denture therapists and thus represent only a small portion of the total population.

DESCRIPTIVE AND DEMOGRAPHIC PROFILE

Not all denture therapists provide services directly to the public. Two subgroups consisting of those practising denture therapy and those not were identified in the data. Of the 257 denture therapists who responded to the questionnaire, only 216 or 84% are currently treating patients in Ontario. Thirty-five respondents (13.6%) stated that they would not be treating patients and six (2.3%) were unsure as to whether they would be practising or not. The reasons for not treating patients are shown in Table 1.

TABLE 1

REASONS FOR NOT TREATING PATIENTS
AS A DENTURE THERAPIST IN 1979

<u>Reason</u>	<u>Number</u>	<u>Percent</u>
Dental laboratory owner	13	37.1
Dental laboratory worker	14	40.0
Working as a dental technician	7	20.0
Working as a dental assistant	1	2.9
Total	35	

Working in some capacity as a dental lab technician or owner accounts for 97% of the denture therapists not treating patients in 1979 although licensed to do so. The six respondents who were unsure as to whether they would be practising included three new graduates, one instructor, one individual on sick leave and one continuing his education. Those not currently practising denture therapy in Ontario, therefore, represent 16% of the total number of licensed respondents.

Since this study is primarily concerned with evaluating the supply of denture therapy services available in this province and factors influencing these services, only those practitioners actively engaged in denture therapy; that is, those treating patients in 1979 will be considered for further analysis.

Demographic Characteristics

As a profession, denture therapy is a recent phenomenon. It wasn't until 1973 that denture therapy was legally recognized in this province. This fact has important consequences for the characteristics of the group in that its members have predominately come from and been trained in other occupations before denture therapy, have places of origin outside of Canada and are older in age.*

(1) Educational Background

Denture therapists have had a variety of educational training experiences with many being trained in more than one occupational area (Table 2).

TABLE 2

EDUCATIONAL BACKGROUND OF DENTURE THERAPISTS

<u>Type</u>	<u>Number</u>	<u>Percent</u>
Dental technician training	203	94.4
Denture therapy course	74	37.2
Dentist training	48	23.9

*Note: Since only 4 or 1.9% of the respondents were female, the pronoun 'he' will be used to refer to denture therapists in this report.

Denture Therapy Training

As shown above, 37% or 74 of the respondents have received training directly in denture therapy. Of those who took a course, 18 took continuing education courses on a part-time basis and 50 attended college full time (48 of these attended George Brown College).

TABLE 3

DENTURE THERAPY EDUCATION

<u>Type</u>	<u>Number</u>	<u>Percent</u>
Continuing Education	18	26.5
George Brown College	48	70.6
Other College	2	2.9
Non-response	6	-
Total	74	

TABLE 4

DENTURE THERAPY COURSE YEAR OF GRADUATION

<u>Year</u>	<u>Number</u>	<u>Percent</u>
1973	2	3.6
74	4	7.3
75	4	7.3
76	12	21.8
77	14	25.5
78	12	21.8
79	7	12.7
Non-response	17	-
Did not graduate	2	-
Total	74	

Ninety-seven percent of those who responded graduated from college. If one examines the year of graduation from a denture therapy course (Table 4) it becomes apparent that the peak years for graduates were between 1976 and 1978. The trend reflects the amount of time required to take a denture therapy course after the profession was legalized since the graduates in those years would be the first new members of the profession. Earlier graduates were individuals who transferred from dental technology courses into the denture therapy course. The number of graduates has been declining since the peak years of 1976-78.

Dental Technology Training

Ninety-five percent (203) of the practitioners were dental technicians prior to becoming denture therapists. The training received in this area was for the most part of an apprenticeship nature (74.4%) with a dental technology course ranking second (34.5%) and armed forces training third (20.3%). The data on training are presented in Table 5.

TABLE 5

TYPE OF DENTAL TECHNOLOGY TRAINING BY DENTURE THERAPISTS

<u>Type</u>	<u>Number</u>	<u>Percent</u>
Dental technology course	70	34.5*
Apprenticeship	151	74.4
Armed Forces Training	41	20.3
Other	32	15.8

* Individuals may have had more than one type of training in dental technology.

Forty-one percent of the practitioners have had a combination of training experiences with apprenticeship being combined with another type being the most common (73%) combination.

Data on the country of apprenticeship in dental technology show that 54% received their training in a country other than Canada. This compares with the data on place of origin presented below. Fifteen percent, however, apprenticed in both a foreign country and Canada. Of those who attended a dental technology course, 47% were trained in Canada. In summary, therefore, most dental technicians received their training in a country other than Canada although the percentages are not very large.

Dental Training

Twenty-four percent of denture therapists attended dental school and of these, 79% or 38 graduated. Most, however, attended in a country other than Canada with Europe being the most frequently mentioned area (Table 6).

TABLE 6

COUNTRY OF DENTAL SCHOOL ATTENDED BY THERAPISTS

<u>Country</u>	<u>Number</u>	<u>Percent</u>
Canada	4	8.3
United States	1	2.1
Europe	34	70.8
British Isles	6	12.5
Other	3	6.3
Total	48	

In summary then, the educational training of those practising denture therapy in Ontario is predominately in the area of dental technology by apprenticeship and few of the therapists have taken courses directly in denture therapy. This trend reflects the recent nature of the profession.

(2) Birthplace

Sixty percent of all practising denture therapists indicated a birthplace outside Canada, with the vast majority of these coming from Europe (66%).

TABLE 7

BIRTHPLACE OF PRACTISING DENTURE THERAPISTS

<u>Place</u>	<u>Number</u>	<u>Percent</u>	<u>Place</u>	<u>Number</u>	<u>Percent</u>
<u>Canada</u>	85	39.9	<u>British Isles</u>	26	12.2
Ontario	71		<u>United States</u>	2	.9
Eastern Canada	7		Other	16	7.5
Western Canada	5		Non-response	3	-
Canada, unspecified	2				
<u>Europe</u>	84	39.4			
Eastern Europe	45				
Western Europe	28		Total	216	
Southern Europe	10				
Scandinavia	1				

This breakdown coincides with the foreign nature of the educational training of denture therapists.

(3) Age

As already shown, since no training facilities existed for denture therapists until recently they have come from other occupational groups, most notably dental technology. This is reflected in the age make-up of the members. As a group denture therapists have a higher percentage of older practitioners than other professions with a median age of 45 years. Only 14% of practising denture therapists are under 30 years old but 35% are over 50 years of age.

TABLE 8

AGE OF PRACTISING DENTURE THERAPISTS IN 10 YEAR INTERVALS

<u>Age Interval</u>	<u>Number</u>	<u>Percent</u>
Under 30	30	13.9
31 - 40	58	26.9
41 - 50	52	24.1
51 - 60	53	24.5
Over 60	23	10.6
Total	216	

This age distribution will have important consequences for the profession in the future when members retire since, as shown, the numbers of graduates in denture therapy has been declining in recent years. When questioned on retirement plans only 1/3 of the respondents stated that they planned to retire. Of these, 34% plan full retirement at age 65 and 70% plan partial retirement at age 60. When correlated with present age, the data show that within the next ten years 32 responding practitioners or 15% of those currently practising plan semi-retirement

and 6 or 3% plan full retirement. In order to keep pace with attrition, therefore, there must be new graduates filling the gap left by those practitioners who plan to cut down on their services (see Table 9).

TABLE 9

NUMBER OF WORK YEARS UNTIL RETIREMENT

<u>Years</u>	<u>Full Retirement Number</u>	<u>Partial Retirement Number</u>
5 years or less	4	19
6 - 10 years	2	13
11 - 15 years	-	11
16 - 20 years	7	3
> 20 years	8	7
Non-Response	3	3
Total	<u>24</u>	<u>56</u>

PRACTICE CHARACTERISTICS

This chapter provides the descriptive materials regarding the structure and operation of the denture therapist's office. It examines the ways in which the practice is organized to provide a service to the public. Concern will first focus on the various types of work activities undertaken by therapists and then proceed to a more in-depth analysis of what occurs in the denture therapy office or clinic. The type of work organization and the use of auxiliaries will be discussed. From this there follows a discussion of the 'round of life' in the office and the load of work accomplished therein. Finally, therapists' views on how busy they are and whether another therapist is needed in their area are presented.

Work Activities

As already stated, 216 denture therapists were treating patients in Ontario at the time of the survey.* Not all of these restrict themselves to a single workplace, however. Seventy-three practitioners (34%) have a second workplace and thirty-four (16%) work at a third office or clinic. A few of these practitioners move from one community to another but most have their separate workplaces located in the same city. The data indicating type of workplace activity are presented below in Table 10.

TABLE 10

DENTURE THERAPIST WORKPLACE ACTIVITIES

Activity	Main Workplace		Second Workplace		Third Workplace	
	N	%	N	%	N	%
Private Practice	188	87.0	34	46.6	6	17.7
Supervised Denture Therapy	12	5.6	33	45.2	22	64.7
Salaried Activity (denture clinic)	4	1.9	-	-	-	-
Hospital	-	-	2	2.7	1	2.9
Dental Laboratory	7	3.2	3	4.1	-	-
Instructor	5	2.3	-	-	-	-
Other	-	-	1	1.4	5	14.7
Total	216		73		34	

Most denture therapists treat patients as their main workplace activity with only 5 percent not doing so. Private practice is the main form of workplace organization where denture therapy is carried out. With the second and third workplaces, however, the trend is towards increasing activity associated with supervised denture therapy. Sixty-five percent of those with a third workplace indicate that they carry out supervised denture therapy. This represents a total of only 22 practitioners, however.

* This statement, of course, refers to respondents; there may be 25% more denture therapists than this providing a service to the public based on the ratio of working to non-working therapists of our respondents.

When asked whether they practised supervised denture therapy or not, 62 practitioners (30%) stated that they did practise it in some form or other*. Most who do practise it, however, do so in a dentist's office and on a part-time basis throughout the year. Eighty-seven percent carry out supervised denture therapy in a dentist's office with only eight practitioners working on a referral basis in their own offices or clinics. Most of these (55%) work in only one dental office with one dentist. The amount of time spent practising supervised denture therapy averages approximately 10 hours a week with 38% working less than 5 hours a week throughout the year.

* This figure must be considered in conjunction with their definitions of supervised denture therapy. For an analysis of what constitutes supervised denture therapy see Section 3 in which both the legal definition and the practitioners' definitions are presented.

Office Organization

(1) Type of Practice

To a very large extent, denture therapists still retain their autonomy. The vast majority (81%) of those in private practice are entirely independent. By contrast, only 19% engage in a mixed style of practice at their main workplace.

TABLE 11

MAIN FORMS OF PRACTICE AMONG DENTURE THERAPISTS

Type	Main Workplace		Second Workplace	
	N	%	N	%
Solo	157	80.9	15	55.6
Partner	18	9.3	8	29.6
Cost sharing	15	7.7	3	11.1
In dentist's office	1	.5	1	3.7
Other	3	1.6	-	-
Non-response	1	-	-	-
Total	195		27	

This trend continues with regards to the second workplace. Of the 27 denture therapists with second practice locations, fifty-six percent are in solo practice and thirty percent work with partners.

(2) Auxiliary Personnel

Fifty-four percent of all denture therapist offices or clinics employ at least one part-time assistant. This figure takes into account all locations in which patients are treated regardless of whether it represents the main or second workplace location for a given

practitioner.* The data for utilization of auxiliary personnel are presented in Tables 12, 13 and 14.

The average number of auxiliaries employed in either workplace is one. Ten percent of denture therapists employ three or more individuals, 12 percent employ two and 32 percent employ one auxiliary. When comparing first and second workplaces, the percentage of therapists having auxiliaries working for them does not decline in the second workplace but in fact increases.

The most frequently employed type of auxiliary is the secretary-receptionist with 41 percent of denture therapy offices employing this type of personnel. Second in importance is the dental technician. Taken together, dental technicians including non-certified and registered technicians work in 36 percent of the denture therapy offices or clinics. Based on the total number of auxiliaries employed by denture therapists, secretary-receptionists represent 38 percent and dental technicians 41.4 percent. So even though more denture therapy offices employ secretary-receptionists than any other type of auxiliary, dental technicians represent the highest number of personnel employed.

Total numbers of auxiliaries working for denture therapists cannot be considered without analyzing the number of hours they work, however, since not all are full time employees. The number of hours worked by each auxiliary type by workplace is shown in Table 14. For purposes of analysis, a full time person is defined as anyone working over 30 hours a week and a part time person, anyone working under 30 hours per week. Most

* Data on auxiliary utilization for third workplace were unavailable.

TABLE 12
DENTURE THERAPIST EMPLOYMENT OF AUXILIARY PERSONNEL BY WORKPLACE LOCATION

Number of Auxiliaries Employed	Main Workplace		Second Workplace		Total Number of Therapists	
	N	%	N	%	N	%
No auxiliaries	96	48.0	18	38.3	114	46.2
1	56	28.0	22	46.8	78	31.6
2	25	12.5	5	10.6	30	12.2
3	12	6.0	1	2.1	13	5.3
4	4	2.0	1	2.1	5	2.0
5	4	2.0	0	0.0	4	1.6
> 5	3	1.5	0	0.0	3	1.2
Non-response	4	-	25	-	29	-
Total	204		72		276	

TABLE 13
DENTURE THERAPIST EMPLOYMENT OF AUXILIARY PERSONNEL BY TYPE AND WORKPLACE LOCATION

Type of Auxiliary	Number of D.T.'s Employing Stated Auxiliary Type				Number of Each Type of Auxiliaries Employed by D.T.'s			
	Main Workplace		Second Workplace		Total		Main Workplace	
	N	%	N	%	N	%	N	%
Non-certified dental technician	38	6	44	20.9	46	7	53	22.6
Dental technician	23	1	24	11.4	33	1	34	14.5
Registered dental technician	6	3	9	4.3	6	4	10	4.3
Non-certified dental assistant	5	1	6	2.8	5	1	6	2.6
Secretary/receptionist	66	21	87	41.2	69	21	90	38.3
Office manager/bookkeeper	17	3	20	9.5	17	3	20	8.5
Other	19	2	21	10.0	20	2	22	9.4
Non-response	4	25	29	-	4	25	29	-
Total	178	62	240		200	64	264	

TABLE 14

NUMBER AND TYPE OF AUXILIARIES WORKING FULL TIME AND PART TIME
BY WORKPLACE LOCATION

Type of Auxiliary	Main Workplace		Second Workplace		Total	
	Part Time	Full Time	Part Time	Full Time	Part Time	Full Time
Non-certified dental technician	8	38	3	4	11	42
Dental Technician	8	25	0	1	8	26
Registered dental technician	2	4	1	3	3	7
Non-certified dental assistant	2	3	0	1	2	4
Secretary-receptionist	26	43	14	7	40	50
Office mgr.-bookkeeper	12	5	1	2	13	7
Other	7	13	0	2	7	15
Total	65(33.2)	131(66.8)	19(48.7)	20(51.3)	84(35.7)	151(64.3)

auxiliaries work full time (64%). For the main workplace two-thirds work full time and for the second workplace location, 51% work full time.

The number of auxiliaries working for denture therapists was adjusted based on full time or part time status by considering each part time assistant the equivalent of one-half a full time assistant. The data are shown in Table 15. The percentages changed a little but the relative status of each type did not change with the new calculation.

TABLE 15

CALCULATED NUMBER OF AUXILIARY PERSONNEL EMPLOYED
BASED ON HOURS WORKED PER WEEK

Type of Auxiliary	Main Workplace	Second Workplace	Total	
			N	%
Non-certified dental technician	42	5.5	47.5	24.6
Dental technician	29	1.0	30.0	15.5
Registered dental technician	5	3.5	8.5	4.4
Non-certified dental assistant	4	1.0	5.0	2.6
Secretary-receptionist	56	14.0	70.0	36.3
Office manager-bookkeeper	11	2.5	13.5	7.0
Other	16.5	2.0	18.5	9.6
Total	163.5	29.5	193.0	

Employment of auxiliary personnel was influenced by the type of practice. The data indicate that a greater percentage of practitioners had auxiliaries working for them if they were in a group practice as opposed to solo practice, 79 percent as against 53 percent. Comparison of workplace locations showed that a greater percentage of both solo and group practitioners with a second workplace location employed auxiliaries.

TABLE 16

EMPLOYMENT OF AUXILIARIES BY TYPE OF PRACTICE

Practice Type	Main Workplace				Second Workplace				Total			
	Employs Auxiliaries				Employs Auxiliaries				Employs Auxiliaries			
	Yes		No		Yes		No		Yes		No	
	N	%	N	%	N	%	N	%	N	%	N	%
Solo Practice	76	50.7	74	49.3	9	75.0	3	25.0	85	52.5	77	47.5
Group Practice	22	71.0	9	29.0	11	100.0	0	-	33	78.6	9	21.4
- Partner	11	73.3	4	26.7	7	100.0	0	-	18	81.8	4	18.2
-Cost Sharing	10	83.3	2	16.7	3	100.0	0	-	13	86.7	2	13.3
-Other	1	25.0	3	75.0	1	100.0	0	-	2	40.0	3	60.0

Only six percent of practising denture therapists were looking for auxiliaries with the most frequently mentioned type of personnel sought being the dental technician.

(3) Round of Life

The average practitioner works a total of 40 hours during a five day work week. The amount of time devoted to the practice of denture therapy varies considerably, however, depending on whether the therapist devotes all his time to his practice or not. Three major subgroups of practitioners were identified: those who only practice denture therapy whether at one or more offices; those whose main job is a practice but who devote some of their time each week to something else related to denture therapy and; those whose main job is not the practice of denture therapy but who provide a service to the public on a part-time basis only. The relevant data are presented below in Tables 17 and 18.

Hours Per Week Worked

For individuals with only one practice as the main form of work activity, the average work week is 40 hours with 33% working more than 40 hours a week. As expected, individuals with more than one practice location tend to work longer each week with an average of 42 hours a week and 53% working over 40 hours a week. Those practitioners who have other denture therapy related activities besides practice do not have significantly longer work hours than those who don't with an average of 41 hours a week.

Individuals who devote only part of their time to practice spend, on average, only 10 hours a week providing a service to the public.

Days Per Week Worked

In general the total hours worked are spread amongst a five day work week. Fifty-one practitioners or 25% work longer. Most of these

TABLE 17

NUMBER OF HOURS WORKED PER WEEK BY DENTURE THERAPISTS BASED ON WORK ACTIVITIES

Number of Hours	Private Practice 1 Practice		Private Practice > 1 Practice		Main Job ≠ Practice Practice Part Time		Main Job Practice + Additional Activity		Total	
	N	%	N	%	N	%	N	%	N	%
< 5 hrs./wk.	-	-	-	-	2	22.2	-	-	2	1.0
5-10 hrs./wk.	-	-	-	-	4	44.4	-	-	4	1.9
10-15	2	1.4	-	-	-	-	-	-	2	1.0
16-20	4	2.9	-	-	2	22.2	1	20.0	7	3.4
21-25	4	2.9	4	7.4	1	11.1	-	-	9	4.4
26-30	9	6.5	6	11.1	-	-	-	-	15	7.3
31-35	13	9.4	4	7.4	1	-	-	-	17	8.2
36-40	61	43.9	11	20.4	-	-	2	40.0	74	35.8
41-45	17	12.2	7	13.0	-	-	1	20.0	25	12.1
46-50	19	13.7	11	20.4	-	-	-	-	30	14.5
> 50 hrs./wk.	10	7.2	11	20.4	-	-	1	20.0	22	10.6
Non-Response	4	-	1	-	3	-	1	-	9	-
Total	143		55		12		6		216	
Average	40.0		41.8		9.9		40.9		40.0	

TABLE 18

NUMBER OF DAYS PER WEEK WORKED BY DENTURE THERAPISTS
BASED ON WORK ACTIVITIES

Number of Days	Private Practice 1 Practice		Private Practice > 1 Practice		Main Job ≠ Practice Practice Part Time		Main Job Practice + Additional Activity		Total	
	N	%	N	%	N	%	N	%	N	%
1 day or less	-	-	-	-	2	20.0	-	-	2	1.0
1-2 days	3	2.1	-	-	1	10.0	-	-	4	2.0
2-3 days	1	0.7	-	-	2	20.0	-	-	3	1.5
3-4 days	12	8.5	6	12.2	-	-	1	20.0	19	9.3
4-5 days	97	68.8	24	49.0	3	30.0	2	40.0	126	61.5
5-6 days	28	19.9	17	34.7	1	10.0	2	40.0	48	23.4
> 6 days	-	-	2	4.1	1	10.0	-	-	3	1.5
Non-response	2	-	6	-	2	-	1	-	11	-
Total	143		55		12		6		216	
Average	5.0		5.1		3.3		5.3		5.0	

are individuals who divide their time among more than one practice location with 39% of those with more than one practice working longer than 5 days. Those who only practise part-time, work, on average, 3 days a week at their office or clinic.

Amount Of Time With Patients

The above data represent the total amount of time spent by the therapist on his practice including laboratory and administrative work. If one considers only the amount of time spent with patients these figures change dramatically. In general, the amount of time with patients represents only 44% of the total time devoted to the practice or 18 hours. The data indicating total hours per week spent with patients are shown in Table 19. Sixty-nine percent of the practitioners spent less than 21 hours per week dealing directly with patients. If the ratio of patient hours to total hours is examined it is shown that 69% spent less than half of their work time per week with the patient. Eight percent devote less than 20% of their time to patients and 9% spend more than 80% of their time. These figures are not surprising given the amount of time required to prepare and fabricate dentures as opposed to taking impressions and fitting them.

Weeks Per Year Worked

The average practitioner works 48 weeks a year with the range extending from six to fifty-two weeks. Eleven percent of practising denture therapists do not take a holiday but work for the complete year.

When asked how much time they intended to work the next year as compared with the current year, 70% stated that they would be working the same amount of time with 21% stating they would work more and 9% working less.

TABLE 19

AMOUNT OF TIME SPENT WITH PATIENTS COMPARED TO
TOTAL AMOUNT OF TIME WORKED PER WEEK BY DENTURE THERAPISTS

Hours Per Week With Patients	Number of Denture Therapists	Percent	Ratio: Patient Hours To Total Hours	Number of Denture Therapists	Percent
< 5 hrs./wk.	9	4.5	< .1	4	2.0
5-10 hrs./wk	33	16.4	< .2	11	5.5
11-15	49	24.4	< .3	22	11.1
16-20	47	23.4	< .4	51	25.6
21-25	29	14.4	< .5	49	24.6
26-30	13	6.5	< .6	21	10.6
31-35	8	4.0	< .7	12	6.0
36-40	7	3.5	< .8	12	6.0
41-45	4	1.9	< .9	7	3.5
46-50	1	.5	> .9	10	5.0
> 50 hrs./wk.	1	.5			
Non-response	15	-	Non-response	17	-
Total	216		Total	216	
Average	17.5		Average	.44	

Number of Years in Practice

The average number of years in practice is 4 with 86% of those currently treating patients having worked 4 years or more. This figure coincides with the influx of practitioners which occurred after the legislation was passed and the qualifying exams held. New practitioners who have been practising one year or less represent only 9% of the profession.

TABLE 20

NUMBER OF YEARS IN DENTURE THERAPY PRACTICE

<u>Number of Years</u>	<u>Number</u>	<u>Percent</u>
6 years	21	10.0
5	81	38.8
4	76	36.4
3	6	2.9
2	6	2.9
1	12	5.7
< 1 year	7	3.3
Non-response	<u>7</u>	-
Total	216	

In summary, the average practitioner works a 5 day, 40 hour week for 48 weeks a year with the total amount of time devoted to practice varying as to whether the practitioner devotes all or only part of his time to denture therapy practice. Actual time spent with the patient represents only 44% of the total time worked per week.

(4) The Load of Work

On the average, denture therapists each handle about twenty-five patients per week. Thirty-six percent of practitioners handle twenty or fewer patients and twenty-two percent see over forty patients per week. These figures, however, conceal the wide differences that one would expect to find in light of the varied number of hours that practitioners work per week, the type of practice, the use of auxiliaries and the age of the therapist.

TABLE 21

NUMBER OF PATIENTS SEEN PER WEEK BY THERAPISTS

Number of Patients	Therapists Reporting	
	Number	Percent
0-10	27	13.4
11-20	46	22.9
21-30	55	27.4
31-40	29	14.4
41-50	16	8.0
51-60	12	6.0
> 60	16	8.0
Non-Response	15	-
Total	126	

Those denture therapists who devote their full time to the practice of denture therapy treat, on average, fifty-nine percent more patients per week than those who do so only part time (See Table 22). Those who treat patients on a part time basis fall into two major categories; those whose main job is a practice and those whose main job is something else and who only devote a small amount of their time to treating patients.

Those whose main job is a practice treat approximately the same number of patients per week as full time people but treat more than three times as many patients as other part-time people. Those who only practise on a part time basis treat, on average only 9 patients per week. The number of patients treated is proportional to the amount of time worked per week. Part time practitioners treat one-third of the number of patients as full time therapists and work approximately one quarter the amount of time.

By taking the total amount of time spent working per week and dividing by the total number of patients per week one gets the relative hourly load for each practitioner. The data are shown in Table 23. Although this data must be considered in relation to the amount of time spent with patients relative to the total work time per week it does give some indication of the busyness of the practitioners on an hourly basis.

The average amount of time spent on a patient is 1.5 hours. The range is wide, however, and extends from .5 hours or less to over 5 hours per patient. Seventy-five percent of practitioners spent two hours or less per patient.

TABLE 22

NUMBER OF PATIENTS PER WEEK BY WORK ACTIVITIES

Number of Patients	Private Practice 1 Practice		Private Practice > 1 Practice		Main Job # Practice Practice Part Time		Main Job - Practice + Additional Activity		Totals	
	N	%	N	%	N	%	N	%	N	%
0 - 10 Patients	20	15.0	1	1.9	6	66.7	-	-	27	13.4
11 - 20	35	26.3	9	17.0	2	22.2	-	-	46	22.9
21 - 30	38	28.6	13	24.5	1	11.1	3	50.0	55	27.4
31 - 40	19	14.3	9	17.0	-	-	1	16.7	29	14.4
41 - 50	11	8.3	4	7.5	-	-	1	16.7	16	8.0
51 - 60	3	2.3	9	17.0	-	-	-	-	12	6.0
> 60 patients	7	5.3	8	15.1	-	-	1	16.7	16	8.0
Non Response	10	-	2	-	3	-	0	-	15	-
Total	143		55		12		6		216	
Average	24.9		36.0		8.5		30.3		25.2	

TABLE 23'

AVERAGE AMOUNT OF TIME SPENT PER PATIENT*

Average Amount of Time Per Patient	Number of Practitioners	Percent
30 minutes or less	9	4.5
31 - 45 minutes	16	8.0
46 - 60 minutes	37	18.6
61 - 90 minutes	42	21.1
91 mins. - 2 hrs.	45	22.6
2 - 2½ hours	11	5.5
2½ - 3 hours	14	7.0
3 - 3½ hours	1	.5
3½ - 4 hours	11	5.5
4 - 4½ hours	3	1.5
4½ - 5 hours	3	1.5
> 5 hours/patient	7	3.5
Non-Response	17	-
Total	216	
Average	1.5	

*Note: this is total office work time, not actual chairside patient time.

There is a likelihood that those therapists who employ auxiliaries will handle more patients per week than those who lack such help. The relevant data are tabled below.

TABLE 24

AVERAGE PATIENT LOADS CLASSIFIED BY PRESENCE OF AUXILIARIES

	<u>Main Workplace</u>		<u>Second Workplace</u>		<u>All Workplaces</u>	
	Number of Denture Therapists	Average Number of Patients Per Week	Number of Denture Therapists	Average Number of Patients Per Week	Number of Denture Therapists	Average Number of Patients Per Week
No Auxiliaries	87	22.2	10	8.0	97	20.7
Auxiliaries	101	37.4	26	13.0	127	32.4

There is a marked difference in the weekly load of enterprises which use auxiliaries. Such offices handle 37% more patients per week than those who lack such a helper. The differences do not change considerably by workplace in that those practitioners with auxiliary personnel handle 15 or 40 percent more patients a week than those without auxiliaries at the main workplace and 5 or 38 percent more patients at the second workplace.

Based on type of practice, the volume of patients treated per week does not vary to any great extent. Group practitioners treat approximately the same number of patients as do solo practitioners (Table 25).

The number of patient visits reflects the age distribution of the therapists. The years 41-50 are the 'high power' years as far as work load is concerned. Table 26 also suggests that the younger practitioner soon moves into substantial practice as measured by patients per week.

TABLE 25

AVERAGE NUMBER OF PATIENTS PER WEEK CLASSIFIED BY TYPE OF PRACTICE

Type	Main Workplace		Second Workplace		All Workplaces	
	Number of Denture Therapists	Average Number of Patients Per Week	Number of Denture Therapists	Average Number of Patients Per Week	Number of Denture Therapists	Average Number of Patients Per Week
Solo	145	30.1	13	10.2	158	28.5
Group Practice	31	31.2	12	16.9	43	27.3
- Partnership	14	28.8	8	22.5	22	26.5
- Cost Sharing	13	38.5	3	5.3	16	32.3
- Other	4	16.3	1	7.0	5	14.4

TABLE 26

PATIENT LOADS CLASSIFIED BY AGE OF PRACTITIONER - ALL WORKPLACES*

Age of Practitioner	Number	Average Number of Patient Visits/Week
less than 30 years	33	22.8
31 - 40 years	69	26.3
41 - 50 years	59	28.5
51 - 60 years	56	26.8
Over 60 years	20	26.8

* Since an individual practitioner may have more than one workplace location, the total number of individuals in each age category is greater than the actual number of practising denture therapists.

The question arises as to the way in which denture therapists get their patients. Each practitioner was asked to indicate the percentage of patients they received by various referral methods. These percents were used as weight on the total number of patients seen to determine the total number of patients obtained by each method. The relative importance of each method was then obtained. The results are shown in Table 27.

TABLE 27

MAJOR METHODS OF OBTAINING PATIENTS

<u>Referral Source</u>	<u>Total Number of Patients</u>	<u>Percent</u>
Dentist	816.54	13.22
Other Patients	3,921.47	63.49
Another Denture Therapist	38.60	.62
Advertising	1,215.29	19.67
Denturist Society	96.12	1.56
Other	88.97	.44

By far the most important method for obtaining patients is through other patients with 63 percent of the patients obtained in this manner. Second in importance was advertising either through the yellow pages or by use of signs. Although very few patients, only 13 percent, were referred by dentists; this referral method was more important than either referral by another denture therapist or the Denture Therapist Society.*

(5) Busyness

The denture therapists were asked to state whether they were as busy as they would like to be. More than half (52.4%) stated that they were less busy than they wanted to be whereas only 4.4% stated that they were busier. Forty-three percent were satisfied with their current state of work activity.

These responses cannot be considered in isolation, however, since the practitioner's conceptions of busyness may vary considerably based on number of patients they see a week, the length of patient wait for an appointment and whether they felt there was a need for another denture therapist in the area.

*Note: the low percentage of patients obtained by the Denture Therapist Society referral method may be an artifact of the data since this method was a written response whereas the others were listed on the survey form.

Feelings of busyness were closely related to number of patients seen per week. Those individuals who felt they were less busy than they wished saw, on average, 7 patients or 25 percent fewer patients per week than either those who were as busy as or busier than they wished (Table 28).

TABLE 28

AVERAGE NUMBER OF PATIENTS PER WEEK BY BUSYNESS, ALL WORKPLACES^{*}

<u>Busyness</u>	<u>Number of Practitioners</u>	<u>Average Number of Patients/Wk.</u>
As Busy As Like	98	30.8
Less Busy	118	23.3
Busier Than Like	10	30.1

* Note: Since an individual practitioner may have more than one workplace location, the total number of individuals in each busyness category is greater than the actual number of practising denture therapists.

Most patients (93.7%) can see a denture therapist within a week and one-third within one day. If these data are compared to the practitioner's view on busyness it is shown that those who were less busy than they liked saw 81 percent of their patients within two days of an appointment request. On the other hand, those who were as busy as they liked saw only 40 percent of their patients within this time period and those who were busier than they liked saw 66.6 percent (Table 29). This unexpected finding may be explained by the small number of practitioners who stated they were busier than they liked.

TABLE 29

LENGTH OF PATIENT WAIT FOR APPOINTMENT BY BUSYNESS

	no wait	1 day	2 days	3 days	4 days	5 days	1 week	8-14 days	15 or more days
	%	%	%	%	%	%	%	%	%
As busy as like	1.1	17.0	21.6	25.0	4.5	5.7	11.4	9.1	4.5
Less busy	1.9	57.0	22.4	11.2	1.9	1.9	3.7	0.0	0.0
Busier	0.0	22.2	44.4	0.0	11.1	0.0	11.1	11.1	0.0

Ninety-seven percent of denture therapists did not see the need for another therapist in their area. This view is not affected by the busyness of the practitioner with only slightly fewer therapists being as busy as they like expressing a need for another therapist over the other two groups, 5 percent as compared with 2 percent of those less busy and none of those busier than they would like.

(6) Summary

Examination of denture therapy practice characteristics has shown that the majority of denture therapists engage in private practice on a full time basis in a solo work arrangement. Only one third engage in supervised denture therapy on a part time basis primarily in a dentist's office. More than half of the practitioners have auxiliary personnel working for them either on a full time basis or part time, with the most common types being the secretary-receptionist and dental technician.

The amount of time devoted to practice varies according to whether the practitioners had more than one job or not with a 40 hour, 5 day work week for 48 weeks of the year being the average. The amount of time spent with patients represents only 44 percent of the total working time.

The average number of patients treated per week is 25 with the patient load being influenced by the employment of auxiliaries. The most important method for obtaining patients is patient to patient referral.

Half of the practitioners stated that they were less busy than they wanted and 97 percent felt no need for another denture therapist in their area.

THE GEOGRAPHIC DISTRIBUTION OF DENTURE THERAPY SERVICES IN ONTARIO

Whereas the previous Chapter presented descriptive material on the organization of the denture therapy office, this Chapter will examine the distribution of services provided by denture therapists in Ontario. Two methods of analysis will be undertaken.

First, an analysis of the distribution of denture therapy offices in Ontario relative to the population distribution will be presented to determine if a maldistribution exists. There are major drawbacks to the population:denture therapy office ratio, however. (1) It does not take into account individual differences in productivity. Not all denture therapists work the same number of hours or treat the same number of patients. (2) Use of the ratio may result in an overestimation or underestimation of the services available. For example, in one given geographical location (location A) there is one denture therapist who works in three separate offices and in another location of the same population size (location B) there is one denture therapist who works in only one office. Although the population:denture therapy office ratios will differ significantly for these two locations, the total volume of services provided by each office may be the same and only the accessibility of care will differ. (3) At present there exists no base measure from which to assess what represents an adequate population:denture therapy office ratio. Other than illustrating that certain areas have higher ratios than others, no assessment can be made as to whether any of these ratios are adequate for the given population.

Second, for the reasons presented above, an index of the total volume of services based on the total amount of service hours available and

the total number of patients treated per week by geographic location will be presented. This index allows for individual differences in the amount of time devoted to the practise of denture therapy since both full time and part time hours are included. It also takes into account differences in productivity since the total number of patients seen per week is calculated.

Location of Denture Therapy Offices

The most widely used measure of the available supply of services is the population:manpower ratio in which the number of individuals licensed to practise in a profession is related to the population of the area in which they are located. This ratio is inaccurate, however, since as was shown in a previous Chapter, only 84% of licensed denture therapists who responded to the survey are currently treating patients in this province and of these, 34% have two work locations and 16% have three. Therefore, instead of plotting the distribution of licensed practitioners as an indication of supply, the total number of separate workplace locations in which patients are treated for each individual practitioner was calculated. These figures were then compared to the relative percentage of the Ontario population in a given area to obtain the population:denture therapy office ratio (Pop/DTO). The details of this distribution appear below in Tables 30, 31 and 32.

A word must be said here about the problems of making any adequate count of denture therapy offices or clinics. Our survey provides data on practitioners and not offices. The two quantities differ. Some therapists maintain a central office or clinic and also a satellite to which they devote part of their time. On the other hand, some therapists share only

part of an office or clinic either with another denture therapist or with a dentist as in the case of supervised denture therapy. Hence in some locations there are more offices (that is, separate physical structures) than denture therapists and in other locations there are fewer. The data presented below, therefore, refer to the total number of individual denture therapist's workplace locations and not to offices or clinics per se although they will be designated as such. Each office (workplace) represents the services of one practitioner regardless of whether the actual office or clinic is a main or secondary workplace or whether a solo or group practice. The totals, therefore, do not necessarily represent the total number of individuals in the practice of denture therapy or the total number of separate offices or clinics in the province but the total number of separate service units available to the public in Ontario in 1979.

Denture therapy offices are not distributed uniformly across the province. Table 30 displays the relative percentages of population and denture therapy offices and the ratio of the two percentages for each Regional Planning Area^{*} in 1979. The Central Region, although having 65 percent of the offices, is not over-represented to any great extent in that its supply of denture therapy offices exceeds its population by only 6 percent. In the Southwestern Regional Planning Area, however, the supply exceeds its population by 27 percent. In the other three planning areas the relative supply of denture therapy offices is less than the relative supply of population. In the Northwestern area there are 84 percent fewer offices; in the other areas there are approximately 25 percent fewer. The very low percentage of denture therapy offices to population in the northern areas

* The five regional planning areas of Ontario are shown in Figure 1.

Northwestern
Regional
Planning Area

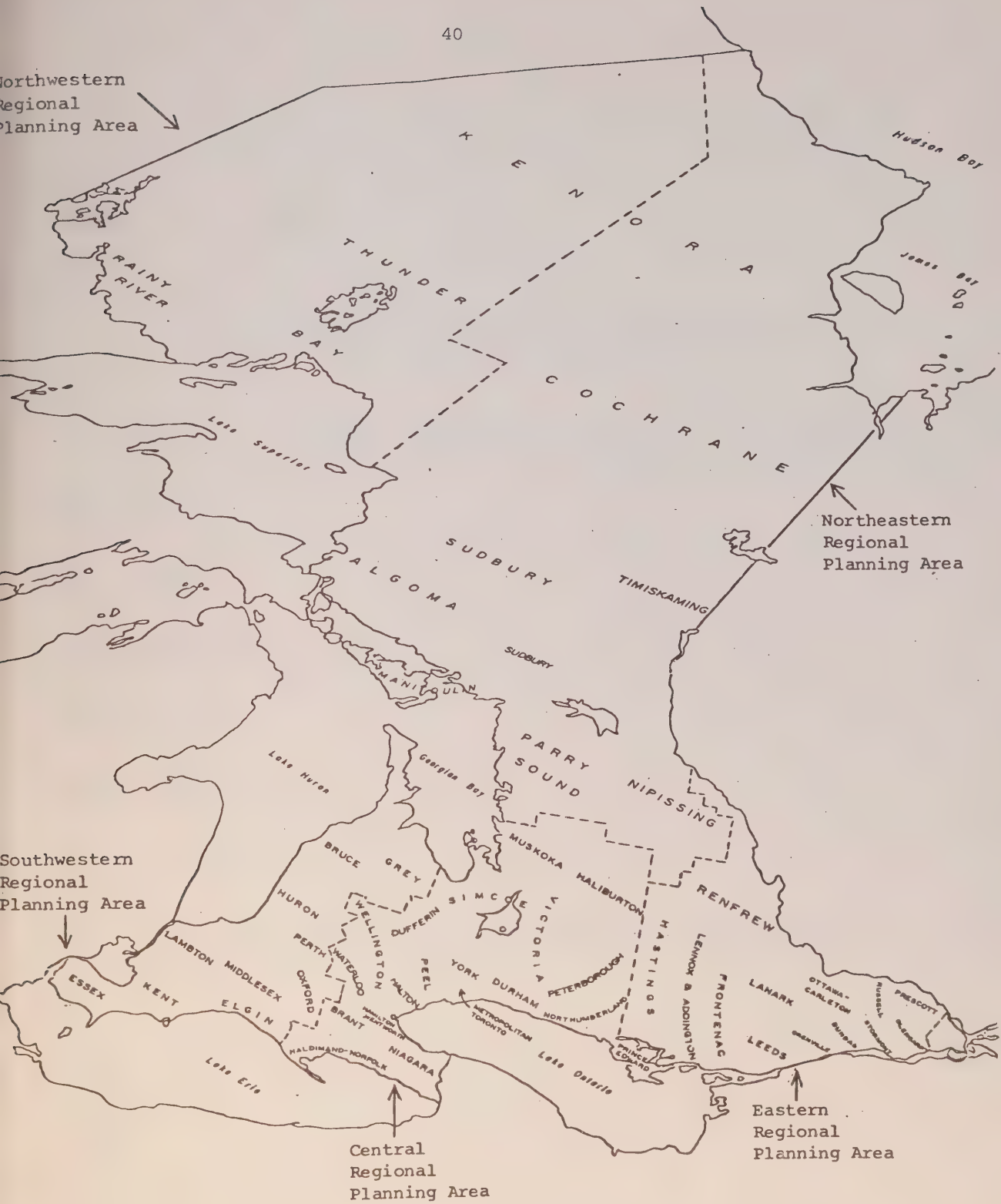


Figure 1. Regional Planning Areas
of the Province of Ontario

may be influenced by the poor response rate in that area although there are still very few licensed therapists in the area relative to the population.

TABLE 30

RELATIVE SUPPLY OF DENTURE THERAPY OFFICES AND POPULATION
IN ONTARIO'S REGIONAL PLANNING AREAS

Area	Denture Therapy Offices	Population	% Denture Therapy Office/ % Population Ratio
	%	%	
Central Regional Planning Area	65.06	61.69	1.05
Eastern Regional Planning Area	10.41	13.99	.74
Southwestern Regional Planning Area	19.33	15.21	1.27
Northeastern Regional Planning Area	4.83	6.42	.75
Northwestern Regional Planning Area	.38	2.39	.16

The overall figures of Table 30 mask some large differences within each regional planning area (see Table 31).

Among Ontario's 49 counties, districts and regional municipalities, eighteen have relatively more therapy offices than population but the remaining 31 have fewer offices than population size warrents.

In the relatively best supplied Southwestern Region, in Lambton, Essex and Elgin counties the relative supply of offices exceeds its

TABLE 31
POPULATION PER DENTURE THERAPY OFFICE IN ONTARIO COUNTIES, DISTRICTS AND REGIONAL MUNICIPALITIES

Place	1978 Population	No. of Denture Therapy Offices	Population per Denture Therapy Office	Relative % of % Denture Therapy Office/ Ontario Total % Population Ratio	
				Ontario	Pop.
Province of Ontario	8,309,092	269	30,888.8	100.00%	
CENTRAL REGIONAL PLANNING AREA	5,150,882	175	19,148.3	65.06	61.99
Brant	97,667	2	48,833.5	0.74	1.18
Dufferin	30,078	0	-	-	.36
Durham	265,538	8	33,192.3	2.97	3.20
Haldimand-Norfolk	86,668	2	43,334.0	0.74	1.04
Haliburton	10,681	0	-	-	.13
Halton	234,892	4	58,723.0	1.49	2.83
Hamilton-Wentworth	407,486	14	29,106.1	5.20	4.90
Muskoka	35,925	2	17,962.5	0.74	.43
Niagara	367,317	15	23,821.1	5.58	4.42
Northumberland	63,795	3	21,265.0	1.11	.77
Peel	421,618	10	42,161.8	3.72	5.07
Peterborough	98,850	3	32,950.0	1.11	1.19
Simcoe	215,855	9	23,983.9	3.35	2.60
Metropolitan Toronto	2,129,171	77	27,651.6	28.62	25.62
Victoria	45,986	2	22,993.0	0.74	.55
Waterloo	297,116	8	37,139.5	2.97	3.58
Wellington	128,582	4	32,145.5	1.49	1.55
York	213,657	12	17,804.7	4.46	2.57

Table continued

..... continued		1978 Population	No. of Denture Therapy Offices	Population per Denture Therapy Office	Relative % of		% Denture Therapy Office/ & Population Ratio
Place					Ontario Total	Pop.	
EASTERN REGIONAL PLANNING AREA							
	1,162,740	28		41,526.4	10.41	13.99	.74
Frontenac	110,146	5		22,029.2	1.86	1.33	1.40
Hastings	104,190	7		14,884.3	2.60	1.25	2.08
Lanark	45,115	0		-	-	.54	-
Leeds & Grenville	80,124	2		40,062.0	0.70	.96	.73
Lennox & Addington	33,116	1		33,116.0	0.38	.40	.95
Ottawa-Carleton	534,941	10		53,494.1	3.72	6.44	.58
Prescott & Russell	51,415	1		51,415.0	0.38	.62	.61
Prince Edward	21,993	0		-	-	.26	-
Renfrew	81,939	1		81,939.0	0.38	.99	.38
Stormont, Dundas & Glengarry	99,761	1		99,761.0	0.38	1.20	.32
SOUTHWESTERN REGIONAL PLANNING AREA							
	1,263,417	52		24,296.5	19.33	15.21	1.27
Bruce	58,121	1		58,121.0	0.38	.70	.54
Elgin	69,235	3		23,078.3	1.11	.83	1.34
Essex	314,102	18		17,450.1	6.69	3.78	1.77
Grey	72,576	2		36,288.0	0.70	.87	.80
Huron	55,846	1		55,846.0	0.38	.67	.57
Kent	106,505	4		26,626.3	1.49	1.28	1.16
Lambton	120,026	7		17,146.6	2.60	1.44	1.80
Middlesex	315,945	13		24,303.5	4.83	3.80	1.27
Oxford	84,539	2		42,269.5	0.70	1.02	.69
Perth	66,522	1		66,527.0	0.38	.80	.48

Table continued

.... continued

Place	1978 Population	No. of Denture Therapy Offices	Population per Denture Therapy Office	Relative % of		% Denture Therapy Office/ Population Ratio
				Ontario Total	Pop.	
				DTO		
NORTHEASTERN REGIONAL						
PLANNING AREA	533,612	<u>13</u>	<u>41,047.1</u>	4.83	6.42	.75
Algoma	116,688	4	29,172.0	1.49	1.40	1.06
Cochrane	86,886	1	86,886.0	0.38	1.05	.36
Manitoulin	7,180	0	-	-	.09	-
Nipissing	74,160	2	37,080.0	0.70	.89	.79
Parry Sound	26,814	1	26,814.0	0.38	.32	1.18
Sudbury (District)	19,193	1	19,193.0	0.38	.23	1.65
Sudbury (Reg. Mun.)	163,651	4	40,912.8	1.49	1.97	.76
Timiskaming	39,040	0	-	-	.47	-
NORTHWESTERN REGIONAL						
PLANNING AREA	198,441	<u>1</u>	<u>198,441.0</u>	.38	2.39	.16
Kenora	36,560	0	-	-	.44	-
Rainy River	21,244	0	-	-	.26	-
Thunder Bay	140,637	1	140,637.0	.38	1.69	.23

population by over 40 percent but in Perth, Huron and Bruce counties the supply is between 40 and 50 percent lower. In the Central Regional Planning Area, Metropolitan Toronto, York, Muskoka, Niagara and Simcoe are oversupplied whereas areas such as Halton and Haldimand-Norfolk are undersupplied. In the relatively worst-supplied Northern areas, Sudbury has 39 percent more denture therapy offices and Cochrane has 64 percent fewer offices relative to population size.

Those counties with a higher percentage of urban areas have a correspondingly higher percentage of the offices. For example, Metropolitan Toronto has 29 percent of the denture therapy offices in Ontario and 44 percent of the Central Ontario Planning Area offices.

Table 31 also describes the regional supply of denture therapists relative to population using the population per denture therapy office ratio (Pop/DTO).

In Ontario there were 30,889 persons per denture therapy office in 1979. The relative supply of denture therapy offices varies among regional planning areas and, more noticeably, within each planning area.

Examination of the five regional planning areas indicates that the Central area is better supplied with denture therapists (19,148/DTO) than the other three. The worst supplied Northwestern Region has only 1 denture therapy office per 198,441 people.

In the Central Area the best supplied location is Muskoka (17,963/DTO) with the worst being the Halton region (58,728/DTO). The distribution within this region, however, is overall rather uniform.

In the Eastern Regional Planning Area, Hastings has the best relative supply of denture therapy offices with 14,884 persons per office.

Lambton and Essex lead the Southwestern Regional Planning area in supply with 17,147 and 17,450 persons per denture therapy office, respectively.

The Sudbury district in Northeastern Ontario has the best supply of denture therapy office per population (19,193/DTO) with the Cochrane District the worst (86,886/DTO).

The denture therapy office supply relative to community population size (Table 32) is derived from Appendices 3-9 in which the community names of denture therapist offices are presented.

There is a tendency for denture therapists to congregate in the larger urban centres and in this they resemble other dental care workers particularly dentists.

Although 44 percent of denture therapy clinics are located in communities with populations of more than 250,000, when compared with the distribution of the Ontario population, it's not so out of line. The data illustrate that only in those communities with a population between 50 and 100,000 are denture therapists underrepresented relative to the Ontario population percentage. Whereas communities of that size represent 11 percent of the Ontario population, they have only 9.67 percent of the offices. In contrast, communities under 10,000 represent only 1.44 percent of the Ontario population but have 10 percent of the denture therapy offices. The denture therapist population is, therefore, evenly distributed throughout

TABLE 32

SUMMARY: POPULATION PER DENTURE THERAPIST IN ONTARIO MUNICIPALITIES
GROUPED BY POPULATION SIZE CATEGORY

Municipal Population Category	1978 Total Population	No. of Denture Therapy Offices	Population Per Denture Therapy Office	Relative % of Ontario Total	
				DTO	Population
> 250,000 (N=4)	3,265,645	118	27,675.0	43.87	39.30
100,000-249,999 (N=7)	914,106	26	35,157.9	9.67	11.00
50,000-99,999 (N=10)	744,306	37	20,116.4	13.75	8.96
25,000-49,999 (N=13)	436,150	24	18,172.9	8.92	5.25
10,000-24,999 (N=27)	664,239	37	17,951.1	13.75	7.99
< 10,000 (N=27)	119,591	28	4,271.1	10.41	1.44
Total	6,144,037	269			
Province of Ontario	8,309,092	269	30,888.8	100.0	100.0

the province relative to the Ontario population distribution by community size. In fact, the greatest split is in terms of communities under 10,000 in which the relative supply of denture therapy offices exceeds the supply of population by 86 percent.

Volume of Services by Location

(1) Methodology

In order to overcome some of the drawbacks of the population: denture therapy office ratio an index of the total amount of service hours available and the total number of patients treated per week by geographic location was calculated. The data are presented in Appendix 9.

Three general measures are used to evaluate the relative availability of services by location: the population:denture therapist hours ratio; the number of patients per therapist and; the relative busyness of each clinic as indicated by the average amount of time spent per patient per week.

Population: Denture Therapist Hours Ratio

If one compares the total number of hours spent per week practising by location and calculates the average number of hours worked per week per denture therapy office, an estimate of the relative amounts of time spent on denture therapy and hence, supply, by location is obtained. This figure takes into account the differences in numbers of denture therapy offices and also differences in the amount of time spent at each office. The data are then compared to the population of the area.

Number of Patients per Therapist

To determine how active the therapists are, the average number of patients per office was calculated.

Busyness of Offices

The extent of the busyness of the offices was measured by comparing the ratio of the average number of hours worked to the average number of patients seen. This ratio suggests (1) the relative hourly load and (2) the average amount of time spent on each patient.

(2) Regional Differences

Table 33 reveals that the relatively best supplied Central and Southwestern Regions provide approximately the same amount of service hours per week. The offices in the Eastern Regional Planning Area have, on average, the longest work hours per week (33.0) and the Northeastern Region the fewest (26.4)*. These data are interesting given that the latter two areas have comparatively the same population: denture therapy office ratios with one office per 41,000 population. Before one can conclude that the offices in the Eastern Region have more services, however, an evaluation of the relative busyness of the offices in these areas must be made. This can be determined in a comparison of the number of patients per office per week.

Offices in the Eastern Region treat, on average, the fewest number of patients per week (20.2) and see the fewest number of patients per hour. Correspondingly, these offices spend a smaller percentage of their total work time with their patients with only 38 percent of their time devoted to dealing directly with the public. Those in the Northeastern Region, by contrast, treat the largest number of patients per week (36.3) even though they work the fewest number of hours. Sixty-five percent of their total work time is spent with their patients and they devote approximately .73 of an hour to each patient.

* Due to the poor response rate for the Northwestern Region, data for this area are not included in this analysis in order to avoid possible biases.

TABLE 33

VOLUME OF DENTURE THERAPY SERVICES AVAILABLE IN ONTARIO'S REGIONAL PLANNING AREAS

Area	Total # Dent. Ther. Offices	Hrs./Wk. Worked		Patients/Wk.		Pt. Hrs./Week		% Time Spent with Patients	Avg. Amount of Time per Patient
		Total	Avg.	Total	Avg.	Total	Avg.		
Central Regional Planning Area	175	5,289.6	30.2	3,820.0	21.8	2,311.4	13.2	43.7	1.4 hrs.
Eastern Regional Planning Area	28	924.0	33.0	565.0	20.2	35 .5	12.6	38.3	1.6 hrs.
Southwestern Regional Planning Area	52	1,487.5	28.6	1,261.5	24.3	676.8	13.0	45.5	1.2 hrs.
Northeastern Regional Planning Area	13	342.5	26.4	472.0	36.3	224.0	17.2	65.4	.73 hrs.
Northwestern Regional Planning Area	1	35.0	-	40.0	-	30.0	-	85.7	.88

In summary, even though both the Eastern and Northeastern Regions have the same population:office ratios, they differ considerably in the average number of available service hours and the number of patients treated per week. The total amount of time devoted to practice is not directly related to the number of patients treated since those offices with longer work hours do not treat, on average, more patients. This points to possible regional differences in demand for services by the public or to varying work characteristics of denture therapists.

(3) County Differences

The Regional differences in supply and volume of services mask the wide differences that occur within each region by county. The data on services are presented in Appendix 9.

In general the volume of services provided as measured by the average number of patients treated per week per office is directly related to the amount of time devoted to practice in each location. The same trend exists relative to the population:office ratio with those counties having a higher ratio providing longer hours per week and those with a lower ratio providing fewer hours per week of service. The extremes for each county with regard to hours of service and number of patients treated are summarized in Table 34.

(4) Community Size Differences

The data on available services by community size are presented in Table 35. Communities between 50 and 100,000 population have offices which provide the longest average number of service hours per week (37.5) with communities under 10,000 providing the fewest (19.3) hours. In general,

TABLE 34

SUMMARY: RANGE OF THE SUPPLY AND VOLUME OF SERVICES IN ONTARIO COUNTIES,
DISTRICTS AND REGIONAL MUNICIPALITIES

Region	Hours Per Week		Patients Per Week	
	Highest	Lowest	Highest	Lowest
Central	Muskoka	49.8	Peterborough	53.3
	Peterborough	50.0	Muskoka	48.3
Eastern	Leeds & Grenville	49.2	Leeds & Grenville	47.5
	Prescott & Russell	50.0	Hastings	12.3
Southwestern	Perth	36.0	Lambton	42.0
	Lambton	35.1	Middlesex	10.0
Northeastern	Parry Sound	35.0	Nipissing	12.5
			Sudbury (Dist.)	7.5
				5.2

VOLUME OF DENTURE THERAPIST SERVICES BY
POPULATION SIZE CATEGORIES

Municipal Population Category	Total Number of D.T. Offices	Hrs./Wk. Worked		Patients/Week		Patient Hrs./Week		% Time Spent With Patients	Avg. Amount of Time per Patient
		Total	Average	Total	Average	Total	Average		
> 250,000 (N=4)	118	3678.7	31.2	2468.5	20.9	1572.1	13.32	42.74	1.49
100,000 - 249,999 (N=7)	26	878.7	33.8	1188.5	45.7	449.8	17.3	51.18	.74
50,000 - 99,999 (N=10)	37	1385.8	37.5	1233.0	33.3	626.1	16.9	45.17	1.12
25,000 - 49,999 (N=13)	24	734.5	30.6	582.5	24.3	325.8	13.6	44.36	1.26
10,000 - 24,999 (N=27)	36*	879.8	25.14	633.0	18.09	370.8	10.6	42.15	1.39
< 10,000 (N=27)	28**	483.3	19.33	315.5	12.5	277.9	9.1	47.15	1.54
Total	269								

* Average calculated out of 35 offices since data unavailable for 1 office.

** Average calculated out of 25 offices since data unavailable for 3 offices.

the larger communities provide more service hours than the smaller communities with communities over 50,000 providing an average of 34 hours per office and those under 50,000 having an average of 25.4 service hours available per office. Offices in communities under 50,000 provide 27% fewer hours of service per week. In general, as the community size decreases the available service hours decreases in communities under 50,000. The reverse is true for communities over 50,000. That is, as the size increases the available service hours decreases with communities >250,000 population providing the fewest service hours.

The volume of services provided by an office varies according to community size also. The larger communities treat, on average, more patients per week than the offices in smaller communities with communities between 100 and 250,000 treating the greatest number of patients.

There exists a direct relationship between the amount of time spent on the practice and the number of patients seen in that the fewer hours devoted to practice, the fewer patients seen. The ratios, however, are larger than expected in that offices in communities under 50,000 population work 27% fewer hours but treat 45% fewer patients. The only exception to this trend occurs in cities with a population between 100 and 250,000 population. These offices provide 34 hours of service a week but treat, on average, 46 patients per week or spend .74 of an hour with each patient as compared to an overall average of 1.3 hours per patient.

There exist no significant differences in percentage of time spent with patients as compared to total amount of time worked per week by community size.

If one compares both the amount of service hours available per week and the number of patients per week with the population:DT Office ratios, it is shown that the communities which provide fewer average hours of service per week have smaller population:DT Office ratios. For example, in communities under 10,000, the population:DT Office ratio is 4,271/DTO and each office also provides, on average, fewer hours of service. The number of patients treated per week also corresponds with the population:DT Office ratio in that the smaller the ratio, the smaller average number of patients treated per office. This is not surprising since the potential available patients have to be divided among more offices relative to the population size. Cities between 100-250,000 population have the highest population:DT Office ratio (35,157.9/DTO) and also treat the greatest average number of patients, 45.7.

Summary

Denture therapy offices are not distributed evenly throughout the province with 65 percent of the offices located in the Central Regional Planning Area. Therapists tend to congregate in the larger urban centres.

Based on the population:DT Office ratio, the supply of denture therapy offices exceeds its population by 27 percent in the Southwestern Planning Area and by 6 percent in the Central Planning Area. In the Northwestern part of the province there are 84 percent fewer offices than the population size warrants. By community size, therapy offices are overrepresented in communities under 10,000 population.

Offices in the Eastern Region provide the longest average hours of service per week but treat the fewest patients. On the other hand, offices in the Northeastern Region have the shortest average work week but treat the most patients per week. Both Regions have the same population:DT Office ratios. Offices in larger communities, in general, provide longer hours of service and treat more patients.

DENTURE THERAPY AND THE STATE

Legislation

Any assessment of the role denture therapists play in the delivery of dental care in Ontario must include a brief analysis of the legislation governing this group. The importance of denture therapists in the dental care system is partly determined by the legal definition of scope of practice which circumscribes the functions they may perform and the conditions under which they are allowed to operate. Adequate understanding of the changes which have taken place in the legislation also puts into perspective the current situation between denture therapists and dentists.

Legislation governing any occupation is concerned primarily with the delineation of functions and regulation. Most professions are self-regulating; that is, its own members ensure that minimum standards of quality are met by the granting of a licence. The legal development of the independent practitioner known in Ontario as a denture therapist will be explored by focusing on these two issues.

The separate dental care group known as denture therapists is a recent phenomenon (since 1973); before that time members of this occupation were known as dental technicians. Originally dental technicians were employed by the individual dentist to work in his office but they later opened up their own labs and serviced numerous dentists (MacFarlane, 1964). This taking over of many of the more technical aspects of the dentists' work by the technician has resulted in a problem which is typical of any profession where new auxiliaries are called upon to perform functions that were once exclusively the province of the professional - the delineation of their relative scopes of practice. Whenever a new profession tries to

'carve out' for itself a scope of practice the neighbouring professions usually try and attack it and limit the new profession's scope so as to not infringe on what was considered their exclusive right.

Up until 1970, dental technicians were covered by the Dental Technicians Act which forbade them from selling dentures directly to the public (i.e. from doing intraoral procedures) and which recognized two classes of dental technicians - the registered dental technician licensed under the Act to practice and the unlicensed dental technician working as an employee of a registered dental technician or dentist. A dental technician was defined as 'a person upon the prescription or orders of legally qualified dentists or physicians makes, produces, reproduces, constructs, furnishes, supplies, alters or repairs any prosthetic denture, bridge, appliance or thing to be used in, upon, or in connection with a human tooth, jaw or associated structure or tissue, or in the treatment of any condition thereof.' The two classes of technicians differed in that only licensed dental technicians could own and operate dental labs. Conditions for certification included having a minimum of four years employment by a dentist or registered dental technician and the passing of an examination administered by the Governing Board of Dental Technicians of the Province of Ontario. Two routes were available for certification: the apprenticeship route and the completion of an approved program at a Community College. The regulatory body for the dental technicians was the Governing Board of Dental Technicians consisting of five members appointed by the Lieutenant-Governor but any regulations made by the Board had to, under Section 3(2) of the Act 'be submitted in writing to the Royal College of Dental Surgeons of Ontario not less than thirty days before being submitted to the Lieutenant-Governor in Council for approval, and any submissions on the part of the

College with respect to any such regulations shall be presented to the Lieutenant-Governor in Council with the application for approval of the regulations'.

In April, 1970, the Committee on the Healing Arts in its report on dentists and dental auxiliaries stated that 'the dental profession's monopoly on the prescribing and fitting of dental prosthetics does serve the public interest by ensuring the safety of the patient from some health risks which could arise if this work were done by persons lacking the dentist's training in the basic health services relevant to an understanding of the mouth'. The Committee felt that none of the auxiliary workers was an alternative or substitute for dentists, did not see the need for major changes in the existing legislation and reaffirmed the need for the supervision of dental technicians. It did, however, feel that the existing dual avenues (apprenticeship and Community College) of gaining qualification as a dental technician remain.

With the recommendation of the Committee on the Healing Arts an Ad Hoc Committee on Dental Auxiliaries was formed to explore in more detail questions of education, professional responsibility, supervision and control. This new Committee proposed to establish a new class of dental technician - the dental technologist. Whereas the duties of a dental technician were defined as including 'the fabrication, reproduction or repair of fixed removable prosthetic appliances, crowns or bridges, as prescribed by the dentist', the dental technologist would 'on the prescription of a dentist, perform the additional duties of fabrication and fitting (i.e. intraoral procedures) of complete dentures and/or the fabrication and fitting of orthodontic bands directly to the public'. In order to qualify as a dental

technologist the dental technician would have to complete an accredited educational training program and work in dental offices or clinics under the direct supervision of a dentist.

The Denturist Society of Ontario was formed in October 1970 with the objective of working for legislative changes to allow dental technicians to provide and repair directly to the public both full and partial dentures without the supervision of a dentist. To this end, they met with the Minister of Health and presented a brief which would make denturism a legal profession. A few dental technicians opened denture clinics for the making of complete and partial dentures and the movement gained momentum. In response to the denturist issue, the government decided to have its own investigation and appointed the Ontario Council of Health Task Force on Dental Technicians in January 1972 to develop recommendations regarding the role and scope of dental mechanics.

Some of the Task Force's recommendations paralleled the Ad Hoc Committee's recommendations re the creation of the dental technologists category. It did, however, disagree with the Committee on the Healing Arts views on the dual avenues to dental technicians and favoured a college only option. Its report stated that although legalizing dental mechanics to deal directly with the public helps to curb the cost of dentures, the economic benefits were outweighed by the potential health danger to the public: 'Dental mechanics are a serious threat to the oral health of the unsuspecting public'. It recommended that 'no dental auxiliary personnel be permitted to work directly with the public except under the direct supervision of the dentist'. As a solution to the economic advantage of going to a dental technician directly for dentures, the Task Force urged

the dental profession to undertake to operate a series of low-cost denture clinics. Although the Task Force members agreed that the dentists' monopoly over dental care was in the best interest of the public, it did not see the need for the dental profession to act as the regulatory body for dental technicians or dental technologists and recommended that legislation re regulation of this group exclude control by the dental profession. This represents the first possibility that the dental technicians could become self-regulatory. Public and editorial support towards the legalization of denture therapy was very pronounced and this had considerable effect on the government's attitude.

In June of 1972, the government introduced Bill 203, an Act providing for the licensing and practice of a new category in the dental health field, the dental technologist. Contrary to the recommendations of its Task Force, the Bill allowed for the unsupervised construction and repair of any complete upper and lower prosthesis for an edentulous arch (i.e. the dental technologist would be allowed to sell dentures directly to the public). As defined by the Act, the practice of dental technology meant:

1. the taking of impressions or bite registrations for the purpose of, or with a view to the making, producing, reproducing, constructing, furnishing, supplying, altering or repairing of any complete upper or complete lower prosthetic denture, or both, to be fitted to an edentulous arch,
2. the fitting of any complete upper or complete lower prosthetic denture, or both, to an edentulous arch.

Requirements for licensure as a dental technologist were to be determined by the Dental Technologists Licensing Board. This regulatory body was to be an independent body which did not have to submit its regulations to the R.C.D.S. and was to be composed of members of the medical and dental

profession, dental technologists, registered dental technicians and dental hygienists. The Bill received first reading and then an advisory committee was set up to determine regulations and qualifications.

The Dental Technologists Advisory Committee concentrated its efforts on admission requirements and training programs and did not attempt to deal with the issue of technologists dealing directly with the public. It recommended that the name of the new practitioner be changed from dental technologist to denture therapist; that only work in an edentulous arch be permitted; that dual registration as a dental technician and a denture therapist not be allowed; and that three years training beyond Grade 13 be required.

Bill 203 was eventually withdrawn and it was reintroduced with amendments as Bill 246. Bill 246 was similar to Bill 203 except for one important section. Section 15 stated that 'no denture therapist shall practice intra-oral procedures of denture therapy on a patient except in the office of a dental surgeon or dental clinic and under the direct supervision of a dental surgeon'. The change in the government's attitude regarding supervised and unsupervised denture therapy was primarily due to concessions made by the dental profession. The dentists agreed to vigorously promote low-cost denture clinics which would offer full upper and lower dentures for \$180 both through voluntary private offices and special clinics sponsored by the dental profession. Bill 246, the Denture Therapists Act, became law on December 15, 1973. This new class of dental practitioner was allowed:

- (1) to take impressions or bite registrations for the purpose of, or with a view to the making, producing, reproducing, constructing, furnishing, supplying, altering or repairing of any removable prosthetic denture;

(2) the fitting of any removable prosthetic denture; (3) the making, producing, reproducing, constructing, furnishing, supplying, altering and repairing removable prosthetic dentures in respect of which a service is performed under subclause 1 or 2 but only under the direct supervision of a dentist.

Requirements for licensure subsequently developed by the Denture Therapists Board included the completion of a Community College course and the passing of an examination. Those already practising denture therapy (illegally) were allowed to write challenge exams set by the Board for which there were no minimum requirements. Almost all members of the Denturist Society refused to sit the examinations due to Section 15 of the Act. In total, 138 individuals passed the exams and were licensed to practice denture therapy.

By 1974 there were indications that the new legislation was not working. Dentists were slow to participate in the low-cost denture plan and 'denturists' continued to practise illegally by ignoring the law and dealing directly with the public.

A new bill, Bill 70 was introduced and passed in June 1974. This legislation still covers denture therapists in Ontario and created two types of denture therapists - the independent denture therapist and the supervised denture therapist. They are defined by the functions they are allowed to perform:

The practice of denture therapy means:

1. the taking of impressions or bite registrations for the purpose of, or with a view to, the making, producing,

reproducing, constructing, furnishing, supplying, altering or repairing of any complete upper or complete lower prosthetic denture, or both, to be fitted to an edentulous arch.

2. the fitting of any complete upper or complete lower prosthetic denture, or both, to an edentulous arch, and
3. the making, producing, reproducing, constructing, furnishing, supplying, altering and repairing any removable prosthetic dentures in respect of which a service is performed under sub-clause (1) or (2).

The practice of supervised denture therapy means:

1. the taking of impressions or bite registrations for the purpose of, or with a view to, the making, producing, reproducing, constructing, furnishing, supplying, altering or repairing of any removable prosthetic denture,
2. the fitting of any removable prosthetic denture and,
3. the making, producing, reproducing, constructing, furnishing, supplying, altering and repairing any removable prosthetic dentures in respect of which a service is performed under sub-clause (1) or (2).

The categories are not mutually exclusive, however, since 'a person licensed to engage in the practice of denture therapy may also engage in the practice of supervised denture therapy but shall not practice intra-oral procedures associated with the practice of supervised denture therapy except in a dentist's office or dental clinic under the direct supervision of a dental surgeon'.

The denture therapist cannot own or have any proprietary interest in a commercial dental lab; that is, a lab operated by a registered dental technician or corporation wherein prosthetic devices are fabricated on the prescription of a dentist but he can own the premises where dentures are fabricated for his own patients.

The regulatory body is composed of three members representing the public interest and six denture therapists. Requirements and qualifications for licensure are identical to those under Bill 246. The situation does not end here, however, since disagreement still exists between denture therapists and dentists especially over the definition of supervised denture therapy.

Supervised Denture Therapy

When asked to define supervised denture therapy 80 percent of the respondents gave definitions which did not differ significantly from the legal definition. Those whose definitions did differ did so mainly in terms of the scope of practice included in the category of supervised denture therapy and the work location in which it is to be practised in that the therapist could fit partial dentures in his own office or clinic if the dentist referred the patient to them for impressions and fittings.

Most denture therapists (87%) felt that the definition should be changed. For 30 percent, a certificate of oral health was the solution with an individual first seeing a dentist and then going to a therapist for partial dentures. The majority however, (67%) wanted supervised denture therapy abolished altogether. They felt that the current legislation was not working and it imposed undue financial hardships on the therapists.

Conflicts with the dental profession were mentioned frequently and lack of cooperation on the part of dentists was emphasized. It was generally felt that the legislation had to be changed in part because dentists were not willing to practise even the restricted form of supervised denture therapy provided for in the current legislation. One therapist summed the situation up in this manner:

"The whole battle between dentists and therapists is financial, political and with a lot of ego thrown in. Neither side wants to concede anything to the other and consequently we both miss our objective or what should be our objective, to provide the best possible service to our patients. Supervised Denture Therapy should be two professionals working in harmony towards a common goal, a healthy patient and at the same time a decent living for themselves, both of which can be achieved with a little bit of common sense and cooperation."

APPENDICES

APPENDIX 1

ONTARIO DENTAL MANPOWER STUDY

SURVEY OF DENTURE THERAPISTS

CONFIDENTIALITY Responses to this questionnaire are STRICTLY CONFIDENTIAL. Results will be reported in statistical form only such that individual identity is not revealed. Your questionnaire is identified by a serial number; only the principal investigator has access to the master list relating individual names to serial numbers.

HOW TO ANSWER QUESTIONS Questions should be answered in terms of your CURRENT, ACTUAL situation, even if your professional activities have recently changed or will soon change in any way.

Good estimates are acceptable if exact answers cannot be given.

Each denture therapist in a group practice or partnership should complete a SEPARATE form.

Answer questions with check marks in boxes and/or writing in the answer on lines provided.

Please answer ALL questions. Be sure to complete all four pages.

Your cooperation is important and appreciated!

- 1 PLACE(S) OF WORK Please indicate the type of workplace (e.g., denture clinic, dental lab, dentist's office), community name and postal code for each place in which you work either full-time or part-time.

- (a) MAIN PLACE OF WORK Type _____
 Town & Postal Code _____, _____ - _____
- (b) SECOND PLACE OF WORK Type _____
 Town & Postal Code _____, _____ - _____
- (c) THIRD PLACE OF WORK Type _____
 Town & Postal Code _____, _____ - _____

- 2 YEAR OF BIRTH _____ 3 BIRTHPLACE _____

- 4 SEX ☐ Male ☐ Female

- 5 WHAT YEAR DID YOU RECEIVE YOUR LICENCE TO PRACTISE DENTURE THERAPY? 19 _____

- 6 DID YOU TAKE A DENTURE THERAPY COURSE? ☐ YES ► Year Graduated 19 _____
 ► College _____
☐ NO

- 7 WERE YOU A DENTAL TECHNICIAN BEFORE BECOMING A DENTURE THERAPIST? ☐ YES ► Answer (a) below.
☐ NO ► Go to Question 8.

- (a) What training did you receive to become a dental technician? ☐ Community College Course
 ► Year Graduated 19 _____
 ► College _____
☒ Apprenticeship ► Country _____
☐ Armed Forces Training
☐ Other ► Please specify _____

- 8 DID YOU ATTEND DENTAL SCHOOL? ☐ YES ► Country _____
 ► Did you graduate? ☐ YES ► Year 19 _____
☐ NO

- ☐ DID NOT ATTEND DENTAL SCHOOL

Please continue overleaf.

PROFESSIONAL
ACTIVITIES

In each of the following four questions indicate your areas of activity (as applicable), stating the number of hours per week and the number of weeks per year you are engaged in each activity.

9 PRIVATE PRACTICE — ARE YOU IN PRIVATE PRACTICE AT ALL, EITHER FULL-TIME OR PART-TIME?

☐ YES ► Check ONE category below, for each private practice you work in, which best describes your practice situation, and indicate the number of hours per week and weeks per year.

☐ NO ► Go to Question 10.

Main Practice LocationHOURS PER
WEEKWEEKS PER
YEAR

☐ Solo practitioner with no sharing of costs

☐ A partner in a complete partnership

☐ Without partners but with sharing of costs and/or employees

☐ Other ► Please specify _____

► WITH HOW MANY OTHER DENTURE THERAPISTS? — exclude self _____

Second Practice LocationHOURS PER
WEEKWEEKS PER
YEAR

☐ Solo practitioner with no sharing of costs

☐ A partner in a complete partnership

☐ Without partners but with sharing of costs and/or employees

☐ Other ► Please specify _____

► WITH HOW MANY OTHER DENTURE THERAPISTS? — exclude self _____

10 The issue of SUPERVISED DENTURE THERAPY is a difficult one for the profession, especially in terms of what constitutes SUPERVISED DENTURE THERAPY.

(a) WHAT DO YOU UNDERSTAND TO BE MEANT BY "SUPERVISED DENTURE THERAPY"?
(Continue on a separate sheet if necessary.) _____

(b) WHAT DO YOU FEEL SUPERVISED DENTURE THERAPY SHOULD BE? _____

(c) BASED ON YOUR DEFINITION GIVEN IN (a) ABOVE,
ARE YOU PRACTISING SUPERVISED DENTURE THERAPY?

HOURS PER
WEEKWEEKS PER
YEAR

☐ YES ► In how many dentists' offices? _____

With how many dentists? _____

☐ NO ► Go to Question 11.

11 SALARIED ACTIVITY — ARE YOU PERFORMING ANY SALARIED WORK AS A DENTURE THERAPIST?

☐ YES ► Check categories below.

☐ NO ► Go to Question 12.

HOURS PER
WEEKWEEKS PER
YEAR

☐ Denture Clinic

☐ Dental Laboratory

☐ Federal Government

☐ Provincial Government

☐ Municipal Government

☐ Other ► Specify _____

12 OTHER ACTIVITY

DO YOU HAVE ANOTHER AREA OF ACTIVITY IN DENTURE THERAPY?
(e.g., school instructor, consultant, committee work)

☐ YES ► Please provide information below.

☐ NO ► Go to Question 13.

NATURE OF ACTIVITY
(Please specify)

(a)

(b)

(c)

HOURS PER
WEEK

WEEKS PER
YEAR

13 IF YOU WILL NOT BE TREATING PATIENTS
IN ONTARIO IN 1979 PLEASE CHECK HERE ☐

If not treating patients, return form now.

Thank you!

REASON FOR NOT TREATING PATIENTS IN 1979

☐ Retired

☐ Continuing Education

☐ Illness

☐ Other ► Specify _____

14 CURRENT PRACTICE
EXPERIENCE

Answer in terms of your current experience, using a TYPICAL or AVERAGE
day or week as indicated. Use decimals or fractions as needed.

MAIN PLACE
OF WORK

2ND PLACE
OF WORK

3RD PLACE
OF WORK

(a) How many PATIENTS PER DAY, on average,
do you treat?

(b) What is the average TOTAL NUMBER OF HOURS PER DAY
worked by you, including laboratory work,
administration, etc.?

(c) How many HOURS PER DAY do you spend WITH PATIENTS?

(d) How many DAYS PER WEEK do you practise?

(e) How many WEEKS did you work in 1978? _____ weeks in 1978

(f) How much time do you expect to spend
practising in 1979 COMPARED TO 1978? ☐ SAME ☐ MORE ☐ LESS

15 AUXILIARIES

We wish to know how many people in each occupation category perform work
directly for you (whether or not you are the 'employer'), and the number
of hours per week each person spends working for you.

For example, if you had 2 Dental Technicians, one of whom worked 36 hours per
week for you while the other worked a total of 40 hours per week, but only 20
hours of this time for you, you would indicate this as follows:

NO. OF PERSONS	OCCUPATIONAL GROUP	HOURS PER WEEK FOR EACH PERSON			
<i>Example</i> 2	Dental Technician	36	20		

☐ Check here if you do not have any auxiliaries working for you, and go to Question 17.

Main Place of Work

NO. OF
PERSONS

OCCUPATIONAL GROUP

HOURS PER WEEK FOR EACH PERSON

(a) _____ Non-certified Dental Technician

(b) _____ Dental Technician

(c) _____ Registered Dental Technician

(d) _____ Non-certified Dental Assistant

(e) _____ Secretary / Receptionist

(f) _____ Office Manager / Bookkeeper

(g) _____ Other ► Specify _____

NO. OF PERSONS	OCCUPATIONAL GROUP	HOURS PER WEEK FOR EACH PERSON
(a) <u>36</u>	Non-certified Dental Technician	<u>38</u> _____
(b) <u>46</u>	Dental Technician	<u>48</u> _____
(c) <u>58</u>	Registered Dental Technician	<u>58</u> _____
(d) <u>68</u>	Non-certified Dental Assistant	<u>68</u> _____
(e) <u>4</u>	Secretary / Receptionist	<u>6</u> _____
(f) <u>14</u>	Office Manager / Bookkeeper	<u>16</u> _____
(g) <u>24</u>	Other ► Specify _____	<u>26</u> _____

16 ARE YOU CURRENTLY SEEKING PERSONNEL OF ANY TYPE?

☐ YES What type(s)? _____

Are you encountering any difficulties in recruiting personnel?

☐ YES ► Please describe difficulties _____

☐ NO _____

☐ NOT SEEKING PERSONNEL

17 ARE YOU (Check one category only): ☐ About as busy as you would like to be?

☐ Less busy than you would like to be?

☐ Busier than you would like to be?

18 HOW DO PATIENTS COME TO YOU FOR TREATMENT? Within the past year, approximately what percentage of patients have been referred to you in each of the following ways?

PERCENTAGE OF PATIENTS

(a) Referred by a dentist? _____

(b) Referred by other patients? _____

(c) Referred by another Denture Therapist? _____

(d) Through advertising (Yellow Pages, etc.) _____

(e) Other ► Specify _____

(Total should equal 100%)

19 AT PRESENT, APPROXIMATELY HOW LONG DOES A PATIENT REQUESTING AN APPOINTMENT WITH YOU HAVE TO WAIT?

(Exclude patients with emergencies and those scheduled for a series of visits.)

CIRCLE only ONE number:

1 2 3 4 5 6 DAYS

OR 1 2 3 WEEKS

OR 1 2 3 4 5+ MONTHS

20 DO YOU PLAN TO RETIRE?

☐ YES — Full Retirement ► Age _____

☐ YES — Semi-Retirement ► Age _____

☐ NO

☐ DON'T KNOW

21 DO YOU FEEL THAT THERE IS A NEED FOR ANOTHER DENTURE THERAPIST IN YOUR AREA?

☐ YES

☐ NO

Thank you for answering our questionnaire. Please return the completed form as soon as possible in the stamped reply envelope provided. Your comments are invited.

ONTARIO DENTAL MANPOWER STUDY

124 Edward Street, Toronto, Ontario M5G 1G6 Telephone (416) 978 6226

APPENDIX 2

COMPARISON OF RESPONDENTS AND NON-RESPONDENTS BY GEOGRAPHICAL LOCATION

Data Compilation and Sources

In comparing the geographical location of respondents and non-respondents, two sources of data were utilized. For the non-respondents, the address given to the licensing board was used. For the respondents, the location given for main workplace was used. Problems of comparison arise if a home address has been supplied (to the licensing body) instead of an office address for the non-respondents but this was beyond the control of the research team.

The geographical divisions and subdivisions of Ontario referred to in this report are drawn from the 1977-78 Municipal Directory, thus, the status and boundaries of regional planning areas, counties, cities etc. are those in effect in 1978 as recognized by the Government of Ontario. For a detailed discussion of the rationale for these divisions refer to Research Report No. 27, Historical Trends in the Supply of Dentists and Dental Hygienists in Ontario, published by this Unit.

TABLE 1

RESPONDENTS AND NON-RESPONDENTS GEOGRAPHICAL LOCATION BY
COUNTIES, DISTRICTS AND REGIONAL MUNICIPALITIES

Place	Non-Respondents Number	Non-Respondents %	Respondents Number	Respondents %	Respondents and Non-Respondents Number	Respondents and Non-Respondents %	Survey Coverage of Total
Province of Ontario	89		245*		334		73.4
Central Regional Planning Area	65	73	170	69.2	235	70.4	72.3
Brant	-	-	2	.8	2	.6	100.0
Dufferin	-	-	-	-	-	-	-
Durham	2	2.3	8	3.3	10	3.0	80.0
Haldimand-Norfolk	1	1.1	2	.8	3	.9	66.7
Haliburton							
Halton	1	1.1	2	.8	3	.9	66.7
Hamilton-Wentworth	8	9.0	10	4.1	18	5.4	55.6
Muskoka	-	-	2	.8	2	.6	100.0
Niagara	4	4.5	16	6.5	20	6.0	80.0
Northumberland	-	-	-	-	-	-	-
Peel	5	5.6	6	2.4	11	3.3	54.6
Peterborough	-	-	4	1.6	4	1.2	100.0
Simcoe	1	1.1	9	3.7	10	3.0	90.0
Metropolitan Toronto	36	40.5	93	38.0	129	38.6	72.1
Victoria	1	1.1	2	.8	3	.9	66.7
Waterloo	2	2.3	6	2.4	8	2.4	75.0
Wellington	1	1.1	3	1.2	4	1.2	75.0
York	3	3.4	5	2.0	8	2.4	62.5

continued

Place	Non-Respondents Number	Non-Respondents %	Respondents Number	Respondents %	Non-Respondents Number	Non-Respondents %	Survey Coverage of Total
Eastern Regional Planning Area							
	7	7.9	26	10.6	33	9.9	78.8
Frontenac	1	1.1	4	1.6	5	1.5	80.0
Hastings	1	1.1	5	2.0	6	1.8	83.3
Lanark	-	-	-	-	-	-	-
Leeds & Grenville	-	-	2	.8	2	.6	100.0
Lennox & Addington	-	-	1	.4	1	.3	100.0
Ottawa - Carleton	3	3.4	12	4.9	15	4.5	80.0
Prescott & Russell	-	-	1	.4	1	.3	100.0
Prince Edward	-	-	-	-	-	-	-
Renfrew	2	2.3	1	.4	3	.9	33.3
Stormont, Dundas and Glengarry	-	-	-	-	-	-	-
Southwestern Regional Planning Area							
	9	10.1	38	15.5	47	14.1	80.9
Bruce	-	-	-	-	-	-	-
Elgin	-	-	2	.8	2	.6	100.0
Essex	5	5.6	14	5.7	19	5.7	73.7
Grey	-	-	1	.4	1	.3	100.0
Huron	-	-	1	.4	1	.3	100.0
Kent	1	1.1	2	.8	3	.9	66.7
Lambton	-	-	6	2.4	6	1.8	100.0
Middlesex	3	3.4	10	4.1	13	3.9	76.9
Oxford	-	-	1	.4	1	.3	100.0
Perth	-	-	1	.4	1	.3	100.0

continued

..... continued

Place	Non-Respondents		Respondents		Respondents and Non-Respondents		Survey Coverage	
	Number	%	Number	%	Number	%	of Total	
Northeastern Regional Planning Area								
	6	6.7	10	4.1	16	4.8	62.5	
Algoma	1	1.1	3	1.2	4	1.2	75.0	
Cochrane	3	3.4	1	.4	4	1.2	25.0	
Manitoulin	-	-	-	-	-	-	-	
Nipissing	-	-	1	.4	1	.3	100.0	
Parry Sound	-	-	1	.4	1	.3	100.0	
Sudbury (District)	-	-	-	-	-	-	-	
Sudbury (Reg. Mun.)	2	2.3	4	1.6	6	1.8	66.7	
Timiskaming	-	-	-	-	-	-	-	
Northwestern Regional Planning Area								
	2	2.3	1	.4	3	.9	33.3	
Kenora	-	-	-	-	-	-	-	
Rainy River	-	-	-	-	-	-	-	
Thunder Bay	2	2.3	1	.4	3	.9	33.3	
Totals	89	100.0	245	100.0	334	100.0	73.4	

* Total for respondents represents total number who answered question and indicated a workplace location not the total sample who returned a survey form.

** Percentage totals for a given row may differ from individual percentage totals due to rounding process.

APPENDIX 3

POPULATION PER DENTURE THERAPY OFFICE IN ONTARIO MUNICIPALITIES WITH 1978 POPULATIONS >250,000

Place (N=4) *	1978 Population	Number of Denture Therapy Offices	Population Per Denture Therapy Office	Relative Percent of Ontario Total DTO Pop.
CENTRAL REGIONAL PLANNING AREA				
<u>Hamilton-Wentworth</u>	307,964	14	21,997.4	5.2 3.71
<u>Peel</u>	273,467	7	39,066.7	2.6 3.29
<u>Metropolitan Toronto</u>	2,129,171	77	27,651.6	28.62 25.62
EASTERN REGIONAL PLANNING AREA				
<u>Ottawa-Carleton</u>	301,317	8	37,664.6	2.97 3.63
SOUTHWESTERN REGIONAL PLANNING AREA				
<u>Middlesex</u>	253,726	12	21,143.8	4.46 3.05
TOTAL	3,265,645	118	27,675.0	43.87 39.30

* N= refers only to municipalities that have denture therapists in 1979.

APPENDIX 4

POPULATION PER DENTURE THERAPY OFFICE IN ONTARIO MUNICIPALITIES WITH
1978 POPULATIONS BETWEEN 100,000 and 249,999

Place (N=7)	1978 Population	Number of Denture Therapy Offices	Population per Denture Therapy Office	Relative Percent of Ontario Total DTO Pop.
CENTRAL REGIONAL PLANNING AREA				
Durham	113,753	3	37,917.7	1.11 1.37
Halton	108,254	2	54,127.0	.74 1.30
Niagara	124,304	3	41,434.7	1.11 1.50
Peel	123,837	3	41,279.0	1.11 1.49
Waterloo	135,288	3	45,096.0	1.11 1.63
SOUTHWESTERN REGIONAL PLANNING AREA				
Essex	197,235	11	17,930.5	4.10 2.37
Windsor				
NORTHWESTERN REGIONAL PLANNING AREA				
Thunder Bay	111,435	1	111,435.0	0.38 1.34
Thunder Bay				
TOTAL	914,106	26	35,157.9	9.67 11.00

APPENDIX 5

POPULATION PER DENTURE THERAPY OFFICE IN ONTARIO MUNICIPALITIES WITH

1978 POPULATIONS BETWEEN 50,000 AND 99,999

<u>Place (N=10)</u>	<u>1978 Population</u>	<u>Number of Denture Therapy Offices</u>	<u>Population per Denture Therapy Office</u>
CENTRAL REGIONAL PLANNING AREA			
<u>Brant</u>	69,091	2	34,545.5
Niagara	70,554	6	11,759.0
<u>Peterborough</u>	59,110	3	19,703.3
<u>Waterloo</u>	73,314	4	18,328.5
<u>Wellington</u>	71,349	2	35,674.5
<u>York</u>	61,801	2	30,900.5
EASTERN REGIONAL PLANNING AREA			
<u>Frontenac</u>	61,088	5	12,217.6
SOUTHWESTERN REGIONAL PLANNING AREA			
<u>Lambton</u>	52,854	6	8,809.0
NORTHEASTERN REGIONAL PLANNING AREA			
<u>Algoma</u>	80,524	2	40,262.0
<u>Nipissing</u>	50,417	1	50,417.0
<u>Sudbury (Reg. Mun.)</u>	94,204	4	23,551.0
TOTAL	744,306	37	20,116.4
Relative % of Ontario Total		Population	
DTO		13.75	
		8.96	

APPENDIX 6

POPULATION PER DENTURE THERAPY OFFICE IN ONTARIO MUNICIPALITIES WITH

1978 POPULATIONS BETWEEN 25,000 AND 49,999

<u>Place (N=13)</u>	<u>1978 Population</u>	<u>Number of Denture Therapy Offices</u>	<u>Population per Denture Therapy Office</u>
CENTRAL REGIONAL PLANNING AREA			
<u>Durham</u>			
Newcastle	32,006	1	32,006.0
Whitby	30,302	1	30,302.0
<u>Halton</u>			
Halton Hills	34,051	2	17,025.5
<u>Niagara</u>			
Welland	45,261	2	22,630.5
<u>Simcoe</u>			
Barrie	35,586	1	35,586.0
<u>York</u>			
Newmarket	25,133	1	25,133.0
Richmond Hill	35,184	3	11,728.0
EASTERN REGIONAL PLANNING AREA			
<u>Hastings</u>			
Belleville	34,822	4	8,705.5
SOUTHWESTERN REGIONAL PLANNING AREA			
<u>Elgin</u>			
St. Thomas	27,059	3	9,019.7
<u>Kent</u>			
Chatham	39,960	2	19,980.0
<u>Oxford</u>			
Woodstock	26,020	1	26,020.0
<u>Perth</u>			
Stratford	26,515	1	26,515.0
NORTHEASTERN REGIONAL PLANNING AREA			
<u>Cochrane</u>			
Timmins	44,251	1	44,251.0
TOTAL	436,150	23	18,963.0
Relative % of Ontario Total			
DTO	8.55	Population	5.25

APPENDIX 7

POPULATION PER DENTURE THERAPY OFFICE IN ONTARIO MUNICIPALITIES WITH
1978 POPULATIONS BETWEEN 10,000 AND 24,999

Place (N=27)		1978 Population	Number of Denture Therapy Offices	Population per Denture Therapy Office
CENTRAL REGIONAL PLANNING AREA				
<u>Durham</u>	Ajax	23,281	1	23,281.0
	Uxbridge Tp.	10,839	1	10,839.0
<u>Haldimand-Norfolk</u>	Delhi Tp.	14,931	1	14,931.0
	Simcoe	14,093	1	14,093.0
<u>Muskoka</u>	Huntsville	10,737	2	5,368.5
<u>Niagara</u>	Fort Erie	23,808	1	23,808.0
	Grimsby	15,265	1	15,265.0
	Niagara-on-the-Lake	12,238	1	12,238.0
	Port Colborne	19,784	2	9,892.0
<u>Northumberland</u>	Cobourg	11,216	1	11,216.0
<u>Simcoe</u>	Collingwood	11,465	4	2,866.3
	Midland	11,726	1	11,726.0
	Orillia	23,575	1	23,575.0
<u>Victoria</u>	Lindsay	13,687	1	13,687.0
<u>York</u>	Aurora	14,991	2	7,495.5
	Georgina Tp.	18,476	2	9,238.0
	Whitchurch-Stouffville	13,219	2	6,609.5

..... / Continued

<u>Place</u>	<u>1978 Population</u>	<u>Number of Denture Therapy Offices</u>	<u>Population per Denture Therapy Office</u>
EASTERN REGIONAL PLANNING AREA			
<u>Hastings</u>	14,784	2	7,392.0
<u>Leeds & Grenville</u>	20,010	2	10,005.0
<u>Ottawa-Carleton</u>	18,510	1	18,510.0
<u>Renfrew</u>	14,353	1	14,353.0
SOUTHWESTERN REGIONAL PLANNING AREA			
<u>Essex</u>	11,404	2	5,702.0
<u>Grey</u>	19,697	1	19,697.0
<u>Kent</u>	11,142	1	11,142.0
NORTHEASTERN REGIONAL PLANNING AREA			
<u>Algoma</u>	12,893	2	6,446.5
<u>Elliot Lake</u>			
TOTAL	664,239	37	17,951.5

Relative % of Ontario Total
DTO Population
 13.75 7.99

APPENDIX 8

POPULATION PER DENTURE THERAPY OFFICE IN ONTARIO MUNICIPALITIES WITH 1978 POPULATIONS UNDER 10,000

Place (N=27)	1978 Population	Number of Denture Therapy Offices
CENTRAL REGIONAL PLANNING AREA		
<u>Durham</u>	9,028	1
<u>Northumberland</u>	3,411	2
<u>Simcoe</u>	6,610	1
	5,388	1
<u>Victoria</u>	1,629	1
<u>Waterloo</u>	4,869	1
<u>Wellington</u>	2,476	1
Clifford		1
EASTERN REGIONAL PLANNING AREA		
<u>Hastings</u>	2,346	1
<u>Lennox & Addington</u>	4,848	1
<u>Ottawa-Carleton</u>	9,259	1
<u>Prescott & Russell</u>	9,804	1
<u>Stormont, Dundas & Glengarry</u>	1,866	1
<u>Winchester</u>		
SOUTHWESTERN REGIONAL PLANNING AREA		
<u>Bruce</u>	2,748	1
<u>Essex</u>	5,738	1
	3,432	1

..... / Continued

<u>Place</u>	<u>1978 Population</u>	<u>Number of Denture Therapy Offices</u>
Essex	6,259	1
Harrow	2,039	1
Neustadt	498	1
Clinton	3,107	1
Tilbury	4,350	1
Watford	1,413	1
Parkhill	1,274	1
Tillsonburg	9,774	1
Parry Sound	5,248	1
NORTHEASTERN REGIONAL PLANNING AREA		
Nipissing	6,289	1
Sudbury (Dist.)	5,888	1
TOTAL	119,591	28

Relative % of Ontario Total
 DTO 10.41
 Population 1.44

APPENDIX 9

VOLUME OF DENTURE THERAPY SERVICES IN ONTARIO COUNTIES, DISTRICTS AND REGIONAL

MUNICIPALITIES IN 1979 BY PRACTICE TYPE

Place	Number of DT Offices	Hrs/Wk Worked Total Av.	Patients/Wk Total Av.	Patient Hrs/Wk Total Av.	% of Time with Pts.	Av. Amt. Time per Pt. (hrs)	Practice Type
PROVINCE OF ONTARIO	222	7510.8	5670.0	3298.1			Private
	42	447.8	418.5	265.6			Supervised DT
	5	120.0	70.0	30.0			Other
	269	8078.6	6158.5	3593.7	13.4	44.5	TOTAL
CENTRAL REGIONAL PLANNING AREA	143	4959.8	3540.5	2116.8			Private
	29	289.8	269.5	184.6			Supervised DT
	3	40.0	10.0	10.0			Other
	175	5289.6	30.23	3820.0	21.8	43.7	TOTAL
Brant	2	77.5	40.0	17.5			Private
	0	0.0	0.0	0.0			Supervised DT
	0	0.0	0.0	0.0			Other
	2	77.5	38.8	40.0	20.0	8.8	TOTAL
Dufferin	0	0.0	0.0	0.0			Private
	0	0.0	0.0	0.0			Supervised DT
	0	0.0	0.0	0.0			Other
	0	0.0	0.0	0.0	0.0	0.0	TOTAL

Place	Number of DT Clinics	Hrs/Wk Worked		Patients/Wk		Patient Hrs/Wk		% of Time with Pts.	Av. Amt. Time per Pt. (hrs)	Practice Type
		Total	Av.	Total	Av.	Total	Av.			
Durham	8	170.5		166.0		68.0				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	8	170.5	21.3	166.0	20.8	68.0	8.5	39.9	1.02	TOTAL
Haldimand-Norfolk	2	81.8		37.0		33.8				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	2	81.8	40.9	37.0	18.5	33.8	16.9	41.3	2.21	TOTAL
Haliburton	0	0.0		0.0		0.0				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	TOTAL
Halton	4	114.0		76.0		52.3				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	4	114.0	28.5	76.0	19.0	52.3	13.1	45.9	1.50	TOTAL
Hamilton-Wentworth	13	466.0		517.0		263.0				Private
	1	35.0		75.0		35.0				Supervised DT
	0	0.0		0.0		0.0				Other
	14	501.0	35.8	592.0	42.3	298.0	21.3	59.5	.85	TOTAL
Muskoka	2	99.5		96.5		53.3				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	2	99.5	49.8	96.5	48.3	53.3	26.7	53.6	1.03	TOTAL

Place	Number of DT Clinics	Hrs/Wk Worked Total Av.	Patients/Wk Total Av.	Patient Hrs/Wk Total Av.	% of Time with Pts.	Av. Amt. Time per Pt. (hrs)	Practice Type
Niagara	15	550.2	392.5	219.5			Private
	0	0.0	0.0	0.0			Supervised DT
	0	0.0	0.0	0.0			Other
	15	550.2	36.7	392.5	14.6	1.40	TOTAL
					39.9		
Northumberland	1	18.0	36.0	12.0			Private
	2	15.0	21.0	15.0			Supervised DT
	0	0.0	0.0	0.0			Other
	3	33.0	11.0	57.0	9.0	.70	TOTAL
					81.8		
Peel	9	288.5	185.0	96.5			Private
	1	5.0	3.0	4.0			Supervised DT
	0	0.0	0.0	0.0			Other
	10	293.5	29.4	188.0	10.1	1.56	TOTAL
					34.2		
Peterborough	3	150.0	160.0	45.0			Private
	0	0.0	0.0	0.0			Supervised DT
	0	0.0	0.0	0.0			Other
	3	150.0	50.0	160.0	15.0	.94	TOTAL
					30.0		
Simcoe	7	205.0	190.0	98.5			Private
	2	24.0	7.0	3.5			Supervised DT
	0	0.0	0.0	0.0			Other
	9	229.0	25.4	197.0	11.3	1.16	TOTAL
					44.5		
Metro Toronto	57	2110.5	1255.0	878.6			Private
	17	199.5	156.0	118.0			Supervised DT
	3	40.0	10.0	10.0			Other
	77	2350.0	30.5	1421.5	12.9	1.65	TOTAL
					42.4		

Place	Number of DT Clinics	Hrs/Wk Worked		Patients/Wk		Patient Hrs/Wk		% of Time with Pts.	Av. Amt. Time per Pt. (hrs)	Practice Type
		Total	Av.	Total	Av.	Total	Av.			
Victoria	2	35.0		40.0		20.0				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	2	35.0	17.5	40.0	20.0	20.0	10.0	57.1	.88	TOTAL
	6	246.7		133.5		107.3				Private
Waterloo	2	3.0		3.5		2.3				Supervised
	0	0.0		0.0		0.0				Other
	8	249.7	31.2	137.0	17.1	109.6	13.6	43.9	1.82	TOTAL
	3	129.0		108.5		67.0				Private
	1	.3		.5		.3				Supervised
Wellington	0	0.0		0.0		0.0				Other
	4	129.3	32.3	109.0	27.3	67.3	16.8	52.1	1.19	TOTAL
	9	217.6		107.0		84.5				Private
	3	8.0		3.5		6.5				Supervised DT
	0	0.0		0.0		0.0				Other
York	12	225.6	18.8	110.5	9.2	91.0	7.6	40.3	2.04	TOTAL
	20	800.0		499.0		317.5				Private
	7	84.0		66.0		34.0				Supervised
	1	40.0		-		-				Other
	28	924.0	33.0	565.0	20.2	351.5	12.6	38.3	1.64	TOTAL
Frontenac	4	172.5		102.0		56.3				Private
	1	8.0		10.0		8.0				Supervised
	0	0.0		0.0		0.0				Other
	5	180.5	36.1	112.0	22.4	64.3	12.9	35.6	1.61	TOTAL

EASTERN REGIONAL
PLANNING AREA

Place	Number of DT Clinics	Hrs/Wk Worked		Patients/Wk		Patient Hrs/Wk		% of Time with Ptg.	Av. Amt. Time per Pt. (hrs)	Practice Type
		Total	Av.	Total	Av.	Total	Av.			
Prince Edward	0	0.0		0.0		0.0				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
		0.0		0.0		0.0		0.0	0.0	TOTAL
Renfrew	1	28.0		28.0		10.5				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	1	28.0	28.0	28.0		10.5	10.5	35.7	1.0	TOTAL
Stormont, Dundas & Glengarry	0	0.0		0.0		0.0				Private
	1	-		-		-				Supervised DT
	0	0.0		0.0		0.0				Other
	1	-		-		-		-	-	TOTAL
SOUTHWESTERN REGIONAL PLANNING AREA	46	1413.5		1178.5		629.8				Private
	6	74.0		83.0		47.0				Supervised DT
	0	-		-		-				Other
	52	1487.5	28.6	1261.5	24.3	676.8	13.0	45.5	1.18	TOTAL
Bruce	1	-		-		-				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	1	-		-		-		-	-	TOTAL
Elgin	3	77.5		50.0		36.5				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	3	77.5	25.8	50.0	16.7	36.5	12.2	47.1	1.55	TOTAL

Place	Number of DT Clinics	Hrs/Wk Worked		Patients/Wk		Patient Hrs/Wk		% of Time with Pts.	Av. Amt. Time per Pt. (hrs)	Practice Type	
		Total	Av.	Total	Av.	Total	Av.			Private	Supervised DT Other TOTAL
Essex	14	505.0		477.5		238.2				Private	
	4	64.0		66.5		37.0				Supervised DT	
	0	0.0		0.0		0.0				Other	
	18	569.0	31.6	544.0	30.2	275.2	15.3	48.4	1.05	TOTAL	
Grey	2	47.5		44.0		29.5				Private	
	0	0.0		0.0		0.0				Supervised DT	
	0	0.0		0.0		0.0				Other	
	2	47.5	23.8	44.0	22.0	29.5	14.8	62.1	1.08	TOTAL	
Huron	1	40.0		10.0		12.5				Private	
	0	0.0		0.0		0.0				Supervised DT	
	0	0.0		0.0		0.0				Other	
	1	40.0	40.0	10.0	10.0	12.5	12.5	31.3	4.0	TOTAL	
Kent	3	91.0		93.0		49.8				Private	
	1	2.0		4.5		2.0				Supervised DT	
	0	0.0		0.0		0.0				Other	
	4	93.0	23.2	97.5	24.4	51.8	13.0	55.4	.96	TOTAL	
Lambton	6	238.0		282.0		121.0				Private	
	1	8.0		12.0		8.0				Supervised DT	
	0	0.0		0.0		0.0				Other	
	7	246.0	35.1	294.0	42.0	129.0	18.4	52.4	.84	TOTAL	
Middlesex	13	310.5		162.0		106.3				Private	
	0	0.0		0.0		0.0				Supervised DT	
	0	0.0		0.0		0.0				Other	
	13	310.5	23.9	162.0	12.5	106.3	8.2	34.2	1.92	TOTAL	

Place	Number of DT Clinics	Hrs/Wk Worked Total Av.	Patients/Wk Total Av.	Patient Hrs/Wk Total Av.	% of Time with Pts.	Av. Amt. Time per Pt. (hrs)	Practice Type
Oxford	2	68.0	36.0	24.0			Private
	0	0.0	0.0	0.0			Supervised DT
	0	0.0	0.0	0.0			Other
	2	68.0	36.0	24.0	35.3	1.89	TOTAL
Perth	1	36.0	24.0	12.0			Private
	0	0.0	0.0	0.0			Supervised DT
	0	0.0	0.0	0.0			Other
	1	36.0	24.0	12.0	33.0	1.5	TOTAL
NORTHEASTERN REGIONAL PLANNING AREA	12	302.5	412.0	204.0			Private
	0						Supervised DT
	1	40.0	60.0	20.0			Other
	13	342.5	472.0	224.0	65.4	.73	TOTAL
Algoma	4	91.0	109.5	78.5			Private
	0	0.0	0.0	0.0			Supervised DT
	0	0.0	0.0	0.0			Other
	4	91.0	109.5	78.5	86.3	.83	TOTAL
Cochrane	1	30.0	30.0	12.5			Private
	0	0.0	0.0	0.0			Supervised DT
	0	0.0	0.0	0.0			Other
	1	30.0	30.0	12.5	41.7	1.0	TOTAL
Manitoulin	0	0.0	0.0	0.0			Private
	0	0.0	0.0	0.0			Supervised DT
	0	0.0	0.0	0.0			Other
	0	0.0	0.0	0.0	0.0	0.00	TOTAL

Place	Number of DT Clinics	Hrs/Wk Worked		Patients/Wk		Patient Hrs/Wk		% of Time with Pts.	Av. Amt. Time per Pt. (hrs)	Practice Type	
		Total	Av.	Total	Av.	Total	Av.			Private	Supervised DT Other TOTAL
Nipissing	2	47.0		85.0		26.0				Private	
	0	0.0		0.0		0.0				Supervised DT	
	0	0.0		0.0		0.0				Other	
	2	47.0	23.5	85.0	42.5	26.0	13.0	55.3	.55	TOTAL	
Parry Sound	1	35.0		15.0		10.0				Private	
	0	0.0		0.0		0.0				Supervised DT	
	0	0.0		0.0		0.0				Other	
	1	35.0	35.0	15.0	15.0	10.0	10.0	28.6	2.3	TOTAL	
Sudbury (Dist.)	1	2.5		7.5		2.5				Private	
	0	0.0		0.0		0.0				Supervised DT	
	0	0.0		0.0		0.0				Other	
	1	2.5	2.5	7.5	7.5	2.5	2.5	100.0	.33	TOTAL	
Sudbury (Reg. Mun.)	3	97.0		165.0		74.5				Private	
	0	0.0		0.0		0.0				Supervised DT	
	1	40.0		60.0		20.0				Other	
	4	137.0	34.3	225.0	56.3	94.5	23.6	69.0	.61	TOTAL	
Timiskaming	0	0.0		0.0		0.0				Private	
	0	0.0		0.0		0.0				Supervised DT	
	0	0.0		0.0		0.0				Other	
	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	TOTAL	
NORTHWESTERN REGIONAL PLANNING AREA	1	35.0		40.0		30.0				Private	
	0	0.0		0.0		0.0				Supervised DT	
	0	0.0		0.0		0.0				Other	
	1	35.0	35.0	40.0	40.0	30.0	30.0	85.7	.88	TOTAL	

Place	Number of DT Clinics	Hrs/Wk Worked		Patients/Wk		Patient Hrs/Wk		% of Time with Pts.	Av. Amt. Time per Pt. (hrs)	Practice Type
		Total	Av.	Total	Av.	Total	Av.			
Kenora	0	0.0		0.0		0.0				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	TOTAL
Rainy River	0	0.0		0.0		0.0				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	TOTAL
Thunder Bay	1	35.0		40.0		30.0				Private
	0	0.0		0.0		0.0				Supervised DT
	0	0.0		0.0		0.0				Other
	1	35.0	35.0	40.0	40.0	30.0	30.0	85.7	.88	TOTAL

APPENDIX 10

TOTAL VOLUME OF DENTURE THERAPY SERVICES AVAILABLE IN
ONTARIO COMMUNITIES, 1979

<u>Place</u>	<u>Number of Denture Therapy Offices</u>	<u>Hours Per Week</u>	<u>Patients Per Week</u>	<u>Patient Hours Per Week</u>
PROVINCE OF ONTARIO	269	8078.6	6158.5	3593.7
CENTRAL REGIONAL PLANNING AREA	175	5289.6	3820.0	2311.4
<u>Brant</u>				
Brantford	2	77.5	40.0	17.5
<u>Durham</u>				
Ajax	1	40.0	10.0	5.0
Brock Tp.	1	12.0	12.0	12.0
New Castle	1	40.0	20.0	5.0
Oshawa	3	58.0	90.0	35.0
Uxbridge	1	3.0	4.0	2.0
Whitby	1	18.0	30.0	9.0
<u>Haldimand-Norfolk</u>				
Delhi	1	46.8	22.0	13.8
Simcoe	1	35.0	15.0	20.0
<u>Halton</u>				
Burlington	2	94.0	52.0	36.3
Halton Hills	2	20.0	24.0	16.0
<u>Hamilton-Wentworth</u>				
Hamilton	14	501.0	592.0	298.0
<u>Muskoka</u>				
Huntsville	2	99.0	96.5	53.3
<u>Niagara</u>				
Fort Erie	1	28.0	24.5	14.0
Grimsby	1	40.0	30.0	15.0
Niagara Falls	6	225.5	119.5	79.5
Niagara-on-the-Lake	1	-	-	-
Port Colborne	2	72.5	50.0	22.5
St. Catharines	3	122.7	68.5	46.0
Welland	2	89.5	124.5	57.0

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	Number of Denture Therapy Offices	Hours Per Week	Patients Per Week	Patient Hours Per Week
<u>Northumberland</u>				
Campbellford	2	-	21.0	15.0
Cobourg	1	18.0	36.0	12.0
<u>Peel</u>				
Brampton	3	63.5	40.0	24.5
Mississauga	7	230.0	148.0	76.0
<u>Peterborough</u>				
Peterborough	3	150.0	160.0	45.0
<u>Simcoe</u>				
Barrie	1	45.0	50.0	35.0
Collingwood	4	80.0	57.0	20.5
Bradford	1	40.0	15.0	12.5
Midland	1	24.0	20.0	10.0
Orillia	1	32.0	48.0	20.0
Penetanguishine	1	8.0	7.0	4.0
<u>Metropolitan Toronto</u>				
Etobicoke	9	262.5	285.0	128.0
North York	15	465.5	333.5	156.7
Scarborough	11	177.5	115.5	122.0
Toronto	34	1,300.5	577.5	521.8
Toronto (unspecif)	7	144.0	110.0	78.0
<u>Victoria</u>				
Bobcaygeon	1	-	-	-
Lindsay	1	35.0	40.0	20.0
<u>Waterloo</u>				
Dumfries	1	1.5	1.5	1.3
Cambridge	4	123.2	25.5	45.8
Kitchener	3	125.0	110.0	62.5
<u>Wellington</u>				
Clifford	1	40.0	20.0	20.0
Elora	1	.3	.5	.3
Guelph City	2	89.0	88.5	47.0
<u>York</u>				
Aurora	2	33.0	16.5	16.5
Georgina Tp.	2	16.0	16.0	11.0
Markham	2	41.6	16.0	20.5
Newmarket	1	40.0	4.0	2.0
Richmond Hill	3	90.0	55.0	35.0
Whitchurch-Stouffville	2	6.0	3.0	6.0

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	Number of Denture Therapy Offices	Hours Per Week	Patients Per Week	Patient Hours Per Week
EASTERN REGIONAL PLANNING AREA	28	924.0	565.0	351.5
<u>Frontenac</u>				
Kingston	5	180.5	112.0	64.3
<u>Hastings</u>				
Bancroft	1	32.0	20.0	16.0
Belleville	4	100.0	50.0	40.0
Trenton	2	32.0	16.0	8.0
<u>Leeds</u>				
Brockville	2	98.3	95.0	44.5
<u>Lennox-Addington</u>				
Napanee	1	40.0	30.0	20.0
<u>Ottawa-Carleton</u>				
Osgoode Tp.	1	16.0	6.0	6.0
Ottawa	8	302.2	148.0	86.8
Vanier	1	45.0	40.0	37.5
<u>Prescott</u>				
Hawkesbury	1	50.0	20.0	20.0
<u>Renfrew</u>				
Pembroke	1	28.0	28.0	10.5
<u>Dundas</u>				
Winchester	1	-	-	-
SOUTHWESTERN REGIONAL PLANNING AREA	52	1487.5	1261.5	676.8
<u>Bruce</u>				
Southampton	1	-	-	-
<u>Elgin</u>				
St. Thomas	3	77.5	50.0	36.5
<u>Essex</u>				
Amhurstburg	2	38.5	30.0	15.5
Belle River	1	2.0	4.5	2.0
Essex	1	66.0	33.0	19.3
Harrow	1	12.0	24.0	10.5
Leamington	2	70.0	25.0	12.5
Windsor	11	380.0	427.5	215.5

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	Number of Denture Therapy Offices	Hours Per Week	Patients Per Week	Patient Hours Per Week
SOUTHWESTERN REGIONAL PLANNING AREA (cont.)				
<u>Grey</u>				
Neustadt	1	10.0	4.0	7.0
Owen Sound	1	37.5	40.0	22.5
<u>Huron</u>				
Clinton	1	40.0	10.0	12.5
<u>Kent</u>				
Chatham	2	88.5	91.0	47.8
Tilbury	1	2.0	4.5	2.0
Wallaceburg	1	2.5	2.0	2.0
<u>Lambton</u>				
Sarnia	6	238.0	282.0	121.0
Watford	1	8.0	12.0	8.0
<u>Middlesex</u>				
London	12	295.5	159.0	104.8
Parkhill	1	15.0	3.0	1.5
<u>Oxford</u>				
Tillsonburg	1	8.0	6.0	6.0
Woodstock	1	60.0	30.0	18.0
<u>Perth</u>				
Stratford	1	36.0	24.0	12.0
NORTHEASTERN REGIONAL PLANNING AREA				
<u>Algoma</u>				
Elliot Lake	2	7.5	20.0	7.5
Sault Ste. Marie	2	83.5	89.5	71.0
<u>Cochrane</u>				
Timmins	1	30.0	30.0	12.5
<u>Nipissing</u>				
North Bay	1	40.0	75.0	20.0
Sturgeon Falls	1	7.0	10.0	6.0
<u>Parry Sound</u>				
Parry Sound	1	35.0	15.0	10.0

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..... continued

Number of
Denture
Therapy
Offices

Hours
Per Week

Patients
Per Week

Patient
Hours
Per Week

NORTHEASTERN REGIONAL
PLANNING AREA (cont.)

Sudbury District

	Number of Denture Therapy Offices	Hours Per Week	Patients Per Week	Patient Hours Per Week
Espanola	1	2.5	7.5	2.5

Sudbury (R.M.)

Sudbury	4	137.0	225.0	94.5
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NORTHWESTERN REGIONAL
PLANNING AREA

Thunder Bay

Thunder Bay	1	35.0	40.0	30.0
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